

TRAINING EMPLOYEES AND MANAGERS

For Production and Teamwork

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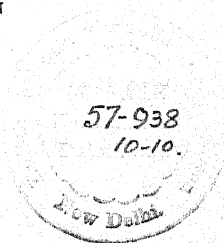
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DEDICATION

TO THOSE THOUSANDS OF BUSINESS AND INDUSTRIAL TRAINING
MEN THROUGH WHOSE EFFORTS THIS NEW PROFESSION, TRAIN-
ING, IS BEING RECOGNIZED BY MANAGEMENT AS A VALUABLE AND
NECESSARY TOOL.

FOREWORD

We live in and derive our living from an economy and a social system few of us understand. Seventy-five years ago we were primarily an agrarian people. As farmers and sons of farmers nearly everyone had an understanding of the economics of the day, which was merely a composite of rather simple individual experiences. Today we are a wage-earning people. Technological changes have advanced so rapidly that it has been impossible to keep pace with developments as they have occurred. The unfortunate result has been that more emphasis has been placed upon machines, materials, and methods than upon the worker himself.

This is a challenging situation, for wage earners form the real substance of our economic structure. The challenge is serious and urgent, and we must use every means to meet it.

Education at work will provide the best solution—from date of employment to date of retirement—part-time courses given by business at the place of work, at company expense, and on company time—courses not only directly connected with the work at hand but cultural subjects as well.

Mr. Planty, Mr. Efferson, and Mr. McCord, the authors of this book, have proved that training pays—for the company, for the worker, and for our economy. They have written a book full of actual “know-how.” Operating individually and as a top-flight team, they represent the best in modern approach. They write from experience and from a successful record in companies whose training departments are performing these tasks and are using the methods recommended. With other corporations that are equally advanced, they have established training as a proved means of solving urgent problems of labor-management relations and plant efficiency. Our company records offer proof, and are available to all. With the records of other forward-looking industries, they give us the background for confidence.

Without an enlightened people, we cannot have understanding. Without understanding, we cannot have intelligent judgment. Without intelligent judgment, our democracy cannot survive. A nation, as well as a business, that remains static in this modern world will go back to the Dark Ages. The price of lethargy is slavery. Freedom

is disappearing from this earth. If our democracy cannot outperform communism, socialism, or any other form of tyranny, its failure is assured; for that ideology that is best will be determined by what provides the most for the well-being of the masses.

Our economy can stand the light of truth. We can go forward only under the star of Christian ethics and continuous development of the individual through dissemination of information and knowledge.

ROBERT W. JOHNSON
Chairman of the Board of Directors
Johnson & Johnson

New Brunswick, New Jersey
July 24, 1948

PREFACE

A major purpose of this volume is to demonstrate that the goals of teamwork and production in business and industry can be best achieved by a training program designed to improve both the skills and attitudes of employees and of managers. In order to develop, illustrate, and justify basic principles which can be applied to all training programs, the scope, objectives, and techniques of the training now being practiced by progressive companies are set forth. By thus subjecting present-day training to a comprehensive and critical examination and by indicating the ever-expanding area of the field, it is the aim to present a useful guide to directors of training and all those actively engaged in training work; to executives, managers, and directors of personnel and industrial relations; and to students preparing to enter management, personnel, or training fields.

The book is divided into three parts. Part I introduces the broad concepts which have developed in recent years in the field of business and industrial training. It answers the questions of executives, managers, and others who want to know specifically what training is, and what it will do in return for its time, trouble, and cost. For those already in training and personnel work Part I will summarize the objectives, breadth, and significance of the field. Part II deals with the organization and administration of training, and is designed primarily to assist those who are responsible for setting up a training department, selecting and training a staff, and planning the operation of the program. Part III is devoted to training programs and methods, and is chiefly for training directors and for managers who are responsible for carrying out the training program. Dealing with practical operations, this section tells how to do the job. Recommendations are supported by examples chosen from successful training programs in business and industry.

Throughout the book the terms "training" and "education" are used synonymously. The authors are aware that training is sometimes thought of as dealing with specific learning, primarily of a motor or mechanical nature, and that education, on the other hand, is sometimes thought of as dealing with the creation of general attitudes, based on theoretical knowledge. The authors believe, however, that this distinction suggests "compartments" of behavior which do

not really exist. Man acts as an integrated being whose specific skills are used effectively when he wills to use them, and the *will* to work is the product of many attitudes, including the attitude of the individual toward his job, his fellow-worker, and his management. Treating "training" and "education" as synonyms helps to avoid that artificial separation which has unrealistically limited the objectives and scope of training and which has persuaded some training directors that they can perform their full function through developing motor and mechanical skills alone. It is a basic concept of this book that specific skills and general attitudes are inseparably related in the effective functioning of man, and that a training program, to be successful, must recognize this relationship.

In designating the various types of training, this book follows the current practice in business and industry. Training is classified, first, according to the position in the organization occupied by the trainee, as in supervisory training; and second, according to the skill or knowledge which the training endeavors to develop, as in technical or office training. While this nomenclature is inconsistent it is so well established that the authors have chosen to follow the usual practice rather than to attempt to introduce a new and unfamiliar system.

Clarification, balance, and clear definition of purposes are badly needed in training today. In visiting various plants and conferring with various training directors, the authors have found little agreement among them in these respects. Each director is likely to insist that his program is unique and that he cannot borrow from others. While training needs and problems undoubtedly vary between companies, there are, nevertheless, principles and concepts which are applicable to all business and industrial concerns. This book endeavors to discover these basic propositions.

In regard to propositions on which recognized training men disagree, the authors state their own position. The new principles that are proposed here should be challenged, tried, and accepted or rejected as experience dictates. It is especially important to the growth and development of training that there be presented a set of propositions toward which the suggestions and criticisms of others can be directed. It is hoped that this broad venture may serve as a framework for training in business and industry to be improved upon and filled out by the thought and practice of others.

The following persons have read and criticized the manuscript or furnished information about training programs, devices, and techniques. Without their valuable help the book would have been limited

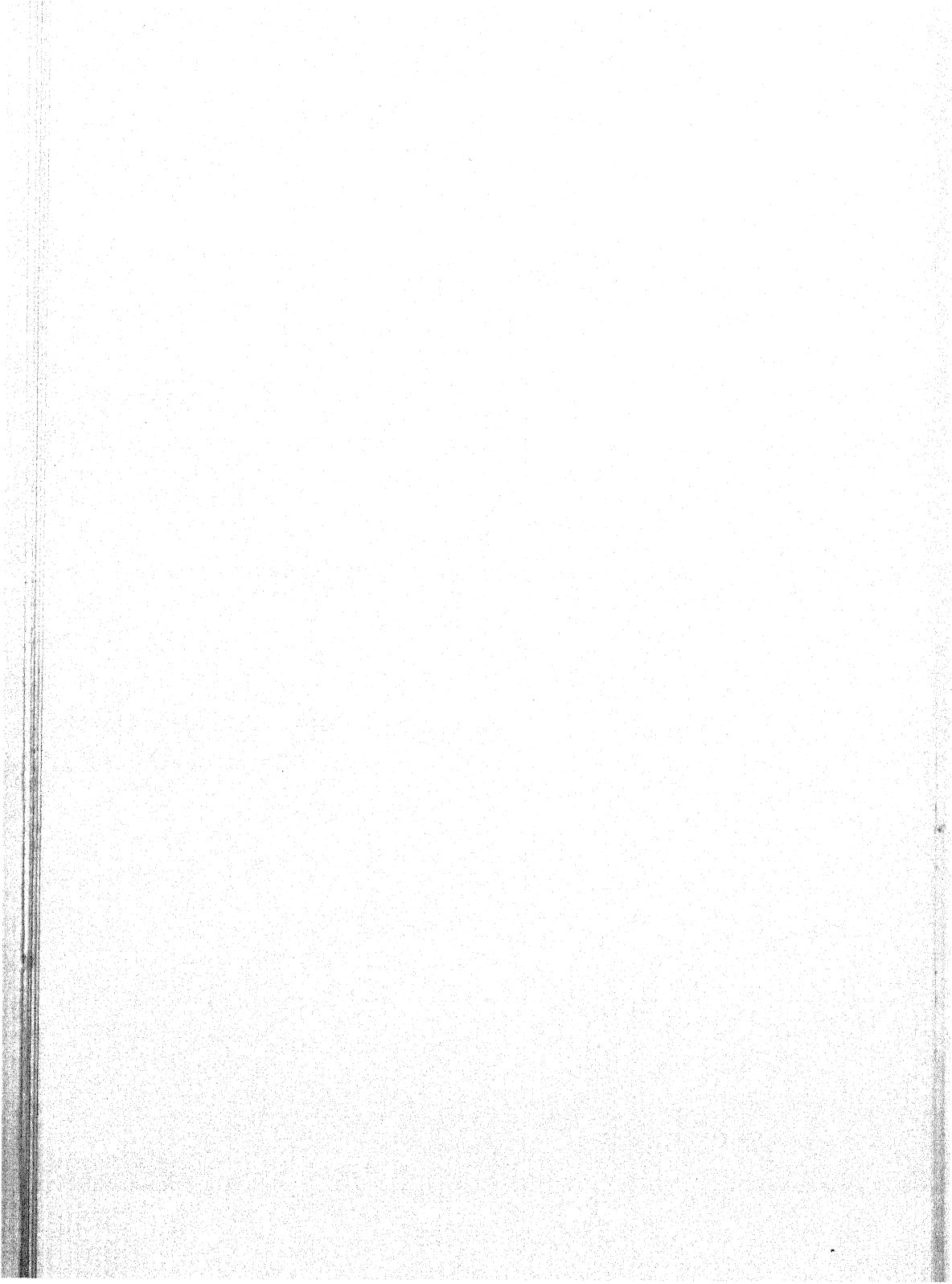
to the experience and vision of the writers and the companies for whom they work.

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Other contributors are identified in the text. To them, as to the many mentioned here, we are grateful both as authors and as training men who ourselves need to keep up with advances in this fast-growing profession. The writers are especially thankful to the American Management Association for permission to quote from their earlier writings which have appeared in A.M.A. publications.

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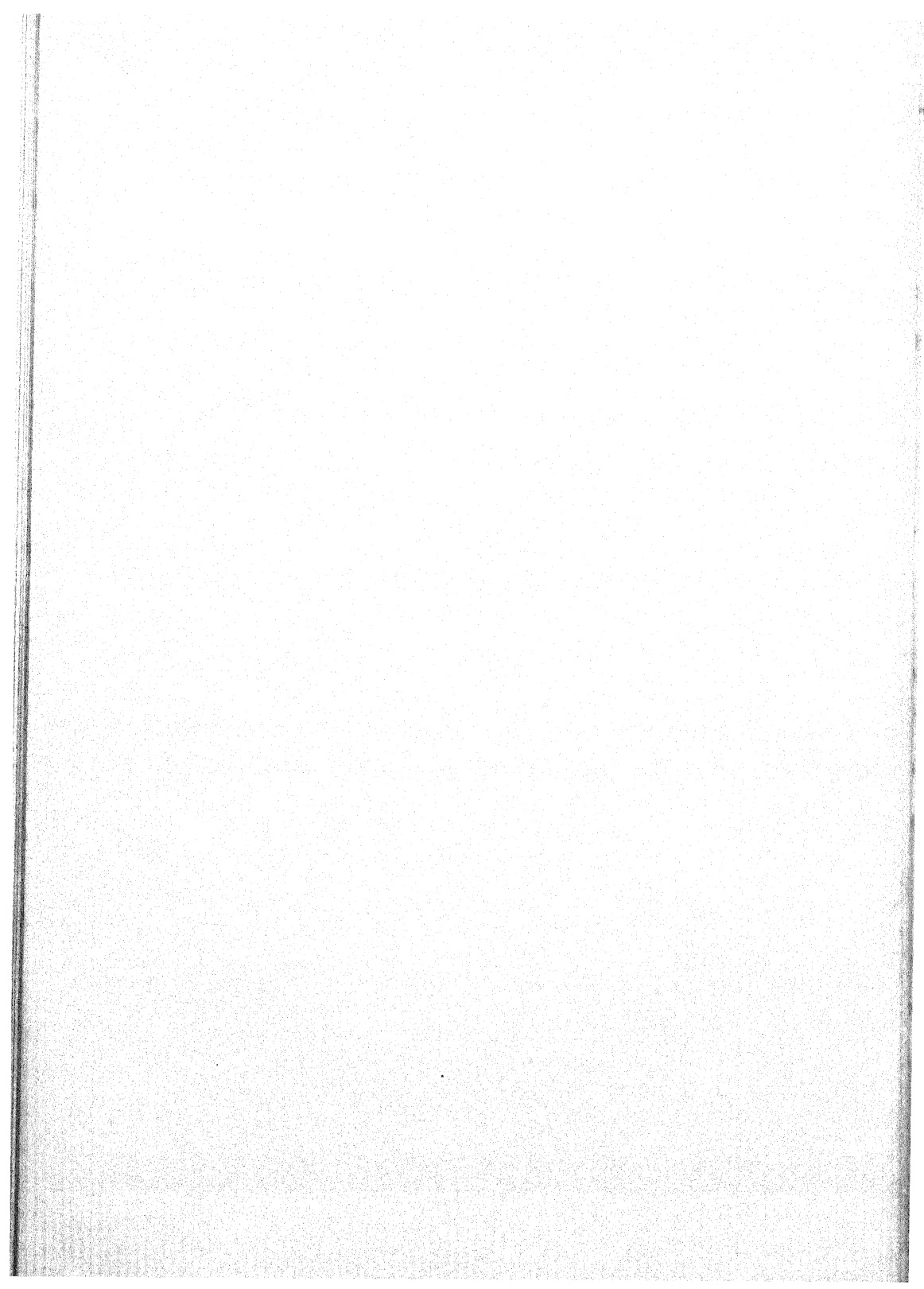
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PART I

TRAINING—WHAT IT IS AND
WHAT IT DOES



CHAPTER 1

WHAT CAN TRAINING DO?

Training, in commerce and industry, is a specialized and very practical form of education. Basically, it prepares people to do their jobs well. To accomplish this it develops the skills that make for rapid, effective work, the knowledge that makes for intelligent action, and the attitudes that bring willing cooperation with fellow-employees and with management. At the same time, it develops comparable skills, understanding, and attitudes in managers, enabling them to secure full cooperation from each other and from their workers.

To understand the need for such service, we must recall certain fundamental changes in our commercial and industrial setup—changes which have taken place chiefly within the last fifty years, and especially since 1910.

The most conspicuous of these changes is a tremendous increase in the size of plants and corporations. From the compact, family-size companies of the late 1800's have grown the present-day corporate giants, with scores of huge plants scattered throughout this country, Canada, Mexico, and even other parts of the world. With this expansion of physical plant has come a corresponding complexity in organization. Most great companies of today had their inception in the brains and energies of individual founders. It is a rare establishment that cannot produce its legend of the "Old Man," a paragon of assorted virtues, not the least of which was his close personal knowledge of every phase of the enterprise and every worker on his payroll. If he was not always lovable—and here tradition generally mellows reality—he at least was human and understandable. His people worked with him, and knew what he was doing and planning. He, in turn, knew them and their families, and treated them like the human individuals they were.

With success and consequent growth, however, the "Old Man" found his business becoming too big for him to manage alone. He therefore hired assistants to handle the various divisions of the now complicated enterprise. The addition of each assistant and each new staff department increased the gap between the "Old Man" and his family of workers. In time the "Big Boss" gave way first to "management" and then to "scientific management," which in its early

quest for efficiency became distant and detached, and replaced the intimate personal leadership with an utterly impersonal "system." Since this meant additional personnel, the bureaucracy that is anathema to businessmen when it appears in government intrenched itself in American business and industry. Today many of our large corporations exhibit departmentalism, with accompanying rules and routines of procedure which effectively remove most workers from contact with the human side of management. All too often they go even further and deny the worker the quality of human individuality.

No less important in their effect upon the industrial and commercial picture were the development and the widespread adoption of mass production, with its repetitious operations in assembly lines. Under this system jobs were both specialized and robbed of skill, except that needed to repeat each simple operation. At the same time, the tempo of production was speeded up amazingly over that of the days of craft work. Responsibility for and pride in the final product of each worker's efforts were reduced in direct proportion to the degree of unit specialization. The individual worker of today does not build a radio; he solders an endless series of connections or screws one kind of gadget in place. He does not operate or help to operate a grocery store; he stocks certain shelves with certain goods or checks the purchases of customers. The isolated and insulated worker makes a bed, types a meaningless column of figures, processes a form, pushes a button, or pulls a lever. He does not see his contribution as a finished operation or product, or even as an important, integrated part of the final product or service. The ultimate objective of his task is uncertain, obscure, a matter for conjecture or indifference. Vast numbers of workers are more familiar with a neighboring state than they are with the departments, the jobs, and the forces that impinge upon and influence their work within their own company.

The Need for Training

With these developments—the growth in size and complexity of corporations, the introduction of scientific management, the speeding up of industrial tempo, the increase in unit specialization, and the consequent isolation of one job from another—have come reactions of great consequence to labor-management relations, to the welfare of business, and to the future of the democratic system. Identity of purpose between owner and worker has largely been replaced by disparity of interest and even active hostility, each toward the other. Pride in individual workmanship and accomplishment has disappeared

in many industrial and commercial establishments. Loyalty too often has been crowded out by mutual conniving and distrust. Lack of faith on both sides of this barricade of conflicting interests has led to a scramble for dominance within the plant, bolstered by legal control and government guarantees. In short, the American industrial system has become a house divided against itself, with its future in jeopardy.

It is often said that a condition so widespread and so grave must be remedied at the top. To a certain extent this viewpoint is valid. Our business structure does contain faults that can be mended only if owners and high-ranking managers come to understand them and take remedial measures. On the other hand, it is quite possible to eliminate bureaucracy, decentralize plants, remove faults of the assembly line, and still have a strife-torn plant with inefficient workers. It also is possible to improve the efficiency and the morale of many an ailing enterprise without making radical changes in either plant or organization. The primary need is to prepare people to function well, willingly, and with understanding within the framework of their situation.

This, as we have already said, is the purpose of training. But its results do not stop there. Authorities on labor relations agree that the labor conflict which now threatens our economic system rests upon lack of human satisfaction for workers and upon lack of understanding cooperation between employees and management. If the American system of free enterprise is to be preserved, its salvation will come by filling these voids, not by restrictive laws, coercion, deceit, or political pressure. To the degree that training meets this need it will share in saving and improving a way of life vital to America and perhaps to the world.

But neither this challenge to the preservation of a social system nor the wholesome integration of all the members of that society can be met by what has traditionally passed in industry and vocational schools for industrial training. This monumental achievement cannot be approached through the narrow avenue of skill and motor training. Its accomplishment compels that type of education which recognizes and meets the diverse demands of a society that has need for frequent, even continuous, change and adjustment. It demands the education of all men to deal effectively with a great variety of intangible forces, with problems of a complex nature where invisible social and economic pressures must be balanced and weighed. This education must make possible the judgment, the social intuition, and the skill in analysis of forces that will create an environment in which our great

technical machine can operate without the chaotic interference of strikes, resistance, and class division.

Moreover, to meet the present industrial need, education must be deliberate and planned. It cannot be left to chance in the fond hope that men will somehow select out of the multitude of choices confronting them those attitudes, facts, and skills that will best equip them for complete, useful, and harmonious working and living within the framework of our American society. Left to his own devices, man can learn the habits which are harmful to himself and society as readily as he can learn those which are good. Man is not born with preconceptions about the world in which he will live and work. He is not prenatally influenced in favor of one economic system or another. He has no prejudgments on the allegiances he owes or the modes of social behavior that will bring him the greatest profit. These things he must learn through a constant process of adjustment and adaptation to new ideas, new attitudes, and new skills. Whoever wishes to influence and mold a man must consciously channel this development and direct it by unremitting guidance toward the desired end.

The leaders in business and industry too largely have failed to grasp this fundamental truth. They have actively sought the assistance of training in the limited area of motor skill development. They have left the more vital area of attitude development almost entirely to chance. The results of their action are painfully apparent. They are in the ignominious position of losing the game by default.

Reports in the daily papers of labor-management discussions and controversies highlight the general absence of trust and understanding. Activities of the various labor and management organizations and of the special lobbyists point to a disparity of interest that grows primarily out of ignorance or deliberate refusal to understand the other fellow's point of view. Misunderstanding is at the root of most of our troubles. Employees and the general public are amazingly ill-informed concerning business and industry. Similarly, many managements are grossly ignorant both of the social and emotional needs of their workers and of the fundamental obligations owed by any business or industry to the society under which it exists.

We are thus treated to the disturbing spectacle of disunity and strife between two groups whose mutual interest should dictate co-operation. This condition will persist until business and industry recognize and act on the principle that the antidote for misconceptions and ignorance is the truth, liberally and frequently administered; and that the only certain and enduring inoculation against the epidemics

of distrust, hate, and indifference is the mutual trust that grows out of humane, equitable treatment of and by all parties.

The representatives of management in every business, large and small, must come to realize the social and economic responsibilities that parallel their rights under a system of free enterprise in a democracy; they must cease to regard labor as a commodity and master those techniques of sound human relations that cement employee-employer cooperation. The bulk of the workers, organized and unorganized, must recognize that their prosperity is intimately linked to the prosperity of the businesses of which they are a part, and that they must give freely of their effort and enthusiasm as real partners in a vast social enterprise. Management and workers alike can be led to this fuller cooperation and understanding through education.

The Tangible Results of Training

We do not offer training merely as one solution to the long-range problem of making the private enterprise system successful. Training costs money, time, and effort today. Very properly, therefore, the executives who establish training programs demand some tangible, practical return. So do the men and women who carry on this work and the employees who participate in it. All expect and should receive benefits that appear in the balance sheet, in the ease with which business is conducted, in the pay check, or in personal satisfaction and improvement. What are some of these tangible results of training?

✓ 1. Reduction of Waste and Spoilage.—Most of the controllable waste in any business or industry is a direct product of the operating habits and attitudes of workers who use materials, whether steel or textiles, carbon paper or stencils. Carelessness, indifference, improper methods, extravagance growing out of a failure fully to understand the importance of conservation—all these matters have been attacked successfully by means of education in the companies whose training programs are described throughout this book.

Job and apprentice training are designed to indoctrinate the employee at the very beginning with those attitudes and work habits which will make it possible for him to work efficiently and with a minimum of the waste and spoilage that come with trial-and-error learning. Orientation courses given to new employees before they begin work also emphasize the importance of reducing waste. Through supervisor training and general education, moreover, com-

panies are teaching workers and management alike to cut costs by reducing waste in offices and production units.

2. Method and System Improvement.—Training effectively stimulates employee interest in the improvement of methods and systems. Most workers do not readily volunteer suggestions, partly because they are indifferent, uninformed, or timid, and partly because they fear criticism. Through skillful publicity, through education in the advantages that accrue to all concerned from improved methods, and through practical training in the ways and means by which systems can be improved, they must be led to make those constructive suggestions that will result directly or indirectly in reducing costs and improving production. Bulletin boards, house organs, special leaflets and flyers, group meetings, classes, individual contacts—all are means of educating employees in their responsibility for method and system improvement and in the ways by which this goal may be achieved. Since these media educate and motivate, they obviously fall within the province of training.

3. Reduction of Absenteeism and Labor Turnover.—Excessive absenteeism and labor turnover generally arise from the dissatisfaction of employees. They may resent the type of supervision they receive; they may feel insecure in their jobs; they may dislike the work that they are called upon to do or feel inadequate in its performance; or there may be some other way in which they are not adjusted to the organization or to their specific jobs. Training is usually able to remedy this maladjustment by giving proper job instruction, by developing understanding and appreciation of the purposes and problems of the organization, or by preparing both worker and supervisor alike for harmonious association. However accomplished, the result is an improvement of a situation that is costly, discouraging, and wasteful of both manpower and facilities.

4. Reduction of Learning Time.—One of the chief obstacles to full and efficient operation is slow learning, which is the result of poor instructional methods. Thousands of companies throughout the country have found that sound, carefully planned vestibule or on-the-job training can reduce learning time by as much as 75 per cent. Moreover, employees who receive such training become considerably more efficient than those who learn their work by sketchy trial-and-error methods.

5. Reduction of Supervisory Burden.—Training directly reduces supervisory expense. The well-trained worker needs less supervision than the one who is inadequately prepared for his job. The former,

once he has been trained, can be depended upon to carry out his job according to the methods prescribed, without repeated reminders or reinstruction. Instead of behaving like a subhuman automaton that responds only to specific, unremitting direction, the trained employee is capable of self-direction and the exercise of independent judgment and initiative. All this means a minimum of costly supervision, as well as a minimal strain on the supervisor's patience.

6. Reduction of Overtime Costs.—Excessive overtime, which greatly increases labor costs, may grow out of several situations that can be corrected by training. One is the failure of supervision to comprehend fully the importance of controlling labor cost variance. Well-meaning supervisors often mistakenly conclude that production goals must be met at any cost. Instruction in the fundamentals of work scheduling can help such persons to recognize the importance of, and therefore to exercise caution in, the control of the scheduling in their own units.

Excessive overtime may also result from deliberate attempts of workers to make a job last. This kind of slowdown is symptomatic of a fundamental ailment of American business and industry today. Workers too frequently fail to recognize that their livelihood and the sustained level of their prosperity depend directly upon effective productive effort. More and more, enlightened industries are coming to see that they must give such workers sufficient familiarity with the rudiments of economics, applied to their own company, to convince them that a full day's work benefits both the employee and his company.

7. Reduction of Machine Maintenance Cost.—In many industries and businesses today, workers are responsible for the operation of machinery and equipment worth hundreds or even thousands of dollars. In addition, they use and are expected to care for factories and offices representing million-dollar investments.

Proper handling of these machines, equipment, and buildings will save costs of maintenance, repairs, and replacement; improper handling or actual abuse will often result in damage to machines, destruction of property, loss of time and production, and reduced quality of output. Employees must know how to maintain the tools of their jobs—whether those tools are typewriters, calculators, drill presses, scrubbing machines, duplicators, or fabulously expensive processing machines—and must want to maintain them. This means that proper job instruction will include the care of equipment and the relation between such care and their own welfare as workers. The

same, of course, is true of buildings. With well-planned and well-administered training the parallel development of skill, knowledge, and attitudes will result in measurable and often impressive savings in this area of costs.

8. Reduction of Grievances.—One of the most time-consuming and burdensome tasks confronting business executives is the settlement of employee grievances, which may find their source in supervision, wages, working conditions, personality of fellow-employees, or a thousand other matters. Every needless grievance means that work suffers, time is lost, morale drops, and efficient operation of the business is impaired; and every unsettled grievance is a possible source of controversy, recrimination, or even a strike.

While a training program alone will not eliminate all grievances, it can remove many of their causes. If company policies are inadequately understood, if supervisors lack the fundamental skills of leadership, or if employees miss the satisfaction and the security that come from full knowledge and appreciation of their jobs, then grievances will continue to arise until training corrects these situations. On the other hand, companies that have used training to correct these and allied causes of employee dissatisfaction report striking reductions in both number and seriousness of grievances with which management must deal.

9. Improvement of Quality.—The success of every business or industrial organization depends largely upon the quality of the service or product which it sells. Direct responsibility for that quality rests, in most instances, with first-level employees. The salesman sells the dependability and the courteous service of his company at the same time that he sells merchandise. The production-line worker, even where quality control departments exist, eventually determines whether or not the customer will receive a product that satisfies him and that will insure his continued purchases. The stenographer or the secretary, whose letters go out to customers or clients, represents her company to more people and has a more immediate influence upon the attitude of those people toward the company than the sales director or the president himself, whose contacts are infrequent and indirect. The receptionist, the bank teller, the elevator operator, the bellhop, the bus driver, or any one of the thousands of purveyors of service and products can make or break the reputation of his employer. Unfortunately, these workers do not always realize that the future of everyone in their organization is intimately related to the adherence to quality standards. If quality drops, sales and patronage also drop.

expenditures must be curtailed, and eventually the earnings and the jobs of persons all up and down the organizational line are adversely affected. Employees therefore must be led to see the direct relationship between the maintenance of quality and their own job security. On the other hand, managements must recognize the great practical value to be gained from encouraging employees to participate actively in quality improvement. Group training designed to facilitate such participation and to instruct employees in the methods of assuring quality will pay large and immediate dividends.

10. Encouragement of Upgrading Within the Company.—No organization is static; changes in personnel on all levels are inevitable. Retirements, deaths, promotions, resignations, and transfers produce vacancies that must be filled satisfactorily if operations are to continue. If a company is constantly compelled to fill vacancies by finding men and women outside its own organization, there is a considerable loss in time and morale. However proficient the new person may be in his special field, he must still go through a period of orientation to the company—a period during which his services have limited value. When the job in question is on a fairly high executive or administrative level, this period of adjustment may amount to six or twelve months and may cost several thousand dollars. This loss may be reduced greatly or even eliminated if the company, to provide a planned, continuous preparation of selected personnel for upgrading, introduces a formal system of training of understudies. Whether the position to be filled is that of switchboard operator, private secretary, headwaiter, plant engineer, office manager, sales director, or president, there should be someone in training for the job. Besides saving valuable time and preserving the continuity of operations, such a system raises morale in the organization by proving that advancement is a natural consequence of good service and ability. To be truly effective, however, such a scheme for upgrading and promotion must have the impetus and direction provided by a planned program of training.

11. Reduction in Accident Rate.—Every executive and safety engineer knows that most accidents are preventable. Faulty equipment, carelessness, improper working habits, undue haste, nervousness, and poor judgment are familiar causes, all of which can be corrected through training. If the employee is better instructed in the performance of his job, if he is adequately impressed with the importance of protecting his own life and health and the lives and health of others, or if management adopts sound preventive techniques in

treating safety and health problems, then accidents will be avoided. Strange as it may seem, people not only must be educated to the need for safety; they must be persuaded by constant and unremitting training to behave in such a fashion that they do not injure themselves or others. Obviously, the development of appropriate attitudes, knowledge, and skill is a job for professionalized training.

12. Improvement of Communication.—It was said at the beginning of this chapter that one of the major problems confronting business today is the loss of contact between manager and workers that comes with growth and increased complexity. In all but very small companies it is extremely difficult to maintain a two-way flow of communication. Yet intelligent formulation and administration of policy depend upon an understanding of and a sensitivity to the needs, hopes, and ambitions of the people who are to be affected by it. It is essential, therefore, that top executives be informed fully and constantly of the true attitudes of all levels of employees. It is equally important that all employees be kept constantly apprised of company policies and the purposes that underlie them. Workers' understanding and acceptance of policy will be conditioned by the closeness of this two-way understanding based on a free flow of information. If it were possible to call together in one meeting all the members of an organization for a weekly staff meeting, during which plans, grievances, suggestions, and all the items of general concern could be aired, the problem of communication would be pretty well solved. The size of the organization often makes this impossible, but training can meet the need through conferences, orientation meetings, policy discussions, and the other group and individual contacts designed to facilitate and regularize intraorganization communication.

13. Development of Employee Versatility.—Some plants expect workers to pick up new skills or to find their own way about when transferred to new jobs. Such a method is ineffective and wasteful in contrast to the fully developed job training program, which instructs employees in a variety of related jobs according to plan and with assurance of high-quality performance. The result is a working force that is flexible within a selected unit or department, since each employee is trained in, and ready to perform, one or several jobs in addition to his regular assignment. Loss of time and production, which usually results from absence, vacations, quits, and sudden increases or decreases in the demands for a single operation, is reduced correspondingly.

14. **Improvement of Morale.**—An often neglected and little understood asset of any company is the morale of its managers, supervisors, and workers. One of the most surprising results of good training is the great improvement in morale. Preparing individuals, and bringing them together to solve group problems cooperatively, works a marvelous and somewhat inexplicable transformation in them. Their loyalties broaden in a wholesome manner; their interests in problems around them are aroused and promoted; their pride in themselves and in the enterprise with which they are associated is increased.

Morale is a basic driving force which management must develop in all those who are effectively to serve industry, themselves, and society. Employees whose morale is high are flexible, adaptive, and receptive. They try to do their jobs well; they take pride in improved or increased production; they seek and suggest new methods or more efficient machines. Workers with low morale do none of these things; they are apathetic toward work, and indifferent to their own as well as to their employer's welfare; and they often show a hostility that may range from stubborn resistance to open rebellion and strikes. Only men and women who know how to work, who want to work, and who understand the relationship of work and profit to the dignity, development, and happiness of human beings can make a democracy succeed. To develop such men and women is the basic goal of training.

Summary

Every business or industry exists inseparable from the social environment of which it is a part. Under our economic system it is the function of any enterprise to accomplish a dual purpose—to produce a service or a product at a reasonable profit, and to discharge its obligation to society by satisfying the needs of those individuals who find employment within the enterprise.

Through the accomplishment of the specific ends detailed in this chapter, business and industry can achieve the more traditional, more practical end of making a profit by virtue of operating efficiently. They can operate more effectively, at lower cost, and with less interruption to a continuous and orderly progress. The interests of customers, managers, and stockholders can thus be served. In addition, and with reference to its broader social obligation, industry and business can, through training, assist their employees to find the satisfaction, the resolution of conflict, the personal integrity, and the pride in self-realization that are the need and the right of every person under a democratic system.

Only through the realization of two purposes—the strengthening and the perpetuation of industry and business, and the maintenance of individual worth and dignity—can the American system of free enterprise be preserved. In education lies the answer. Through education management can be led to recognize and to rectify those flaws in the system growing out of mismanagement, unrealistic concentration on profit, and the conception of labor as a commodity. Through education employees and the public can be led to a full realization of the identity of purpose existing between management and the worker, and to a full understanding of the possibilities for individual growth and prosperity inherent in the present economic order.

CHAPTER 2

WHAT IS TRAINING?

Its Present Scope

Like individuals, industrial or business organizations differ from each other. It can be rightly argued, therefore, that no two training departments can be identical in size, scope, and organization, or in the functions they perform.

This is not to say, however, that each training department must be unique, that it has no elements in common with other training departments. For—again like individuals—all business organizations have basic elements of similarity; otherwise they would be schools, churches, governments, or charitable institutions, but not businesses. For this reason they demand an essential unity of purpose, scope, and organization in their training departments. We believe that those responsible for educational programs and organizations within American business have overlooked this demand for unity and have allowed superficial demands or limitations to confuse them. The result is wide—needlessly wide—variation, not merely in form and organization, but in objectives and in understanding of the term training. The time has come to eliminate this confusion, to organize both concepts and procedures in the light of certain basic problems, needs, and characteristics that are common to all industries and all commercial enterprises.

Varied Concepts of Training

Perhaps the best way to realize the existing confusion is to examine the concepts of training and training operations held by five anonymous but far from hypothetical directors in industries of the same general type. These will be followed by the concept held by a typical management.

Training Director A.—When Training Director A is asked to explain his program, he will give the details of a system for making highly proficient machine operators. That is the extent of his educational and training program. That, he will assure anyone, is what he was hired for. He will display detailed and illustrated instruction

procedure dealing with every different relationship of machine to material and process. He is a developer of manuals on machine and hand skills. The scope of his program is as broad as the number of mechanical operations in his plant and the variety of workers he must train to perform those operations. On the plant organization chart he comes somewhere under the production superintendent.

Training Director B.—When Training Director B is asked to explain his program, he discusses his application of the latest theory of attitude control by means of propaganda. He shows conference plans on development of group behavior, brings out pictures carrying specific emotional appeals, and outlines a program designed to develop attitude-building abilities in supervisors. He tells about his department's column in the weekly plant publication, a column aimed at building employees' faith and confidence in the company. When asked what he does about training of operators for production, he answers that a production man handles that type of thing. It is not part of his program.

Training Director C.—Training Director C specializes in management training. He works for the "top fellows." He ferrets out the latest information in the "confidential" file of American business and buckslips it to the executives with his own pertinent comments. He calls special meetings at which the president of the firm and his staff discuss such things as the proofs of a forthcoming book on the trends of multiple management. He is a highly paid specialist, so much so that a meeting with supervisors, if he had one, would turn out to be a "Yes, sir" affair. But instead of holding meetings, he passes subjects and materials on to the top men with instructions for supervisor discussion. On the organization chart he is "the mysterious Mr. X."

Training Director D.—On the organization chart, Training Director D comes under the personnel department, his status being roughly equal to that of a personnel clerk. He has an operator training program on which he spends considerable time, and a sporadic supervisor training program consisting mostly of JIT, JRT, and JMT material. He is considering an orientation program for new employees, but the personnel department keeps putting him off. One of Director D's major complaints is that management does not know or appreciate what he is doing and does not seem to care. When he instructs the supervisors, they say, "Yes, that's good, but tell the boss. He's the one you've got to sell." This training director never gets a crack at the boss, for he lacks adequate rank. Moreover, though his training concepts are broader than those of A, B, or C.

they are confused and inadequate, which means that he himself is ineffective.

Training Director E.—Director E is a very different person from D, with a different and far more comprehensive program than that of Director A, B, or C. His program includes production training and does a thorough job in that field, just as it effectively builds desirable employee attitudes and keeps top management informed of trends in personnel procedures. In fact, Director E is himself a member of top management, which recognizes the fact that he deals with matters of vital import to the company.

Training Director E is, first of all, the man charged with the job of developing skilled and willing employees. He is the specialist who must and can develop into an efficient machine operator a man who has never seen that type of machine. He also knows how to change poor supervisors into good ones. When a person or a group in the plant must be taught to do a thing better or to understand and appreciate it more fully, E is the man assigned to bring about that change. His art includes changing an apathetic or rebellious employee attitude into one of willing cooperation. He does this more effectively than Director B because he makes attitude training a natural and integrated part of a broad over-all program. His supervisor training is more effective than that of D for the same reason; it is not sporadic, and it does not stop with routine methods. Instead, it includes a constant effort to discover new principles, facts, and methods in the art of leadership and human relations, and to apply these discoveries to the needs of E's industry.

This training director is consulted with regard to every employee-employer contact—be it a Christmas party, an announcement of rate changes or of new policy, a foreman's meeting with employees, the plant newspaper, the safety system, or a layoff. For all of these things have an effect upon employee-employer attitudes, understanding, knowledge, or skill. He acts to coordinate all these activities, for he is the one man in the guiding seat of the behavior-changing vehicle. He knows what each plant activity should emphasize in order best to supplement other activities. He can keep programs from clashing in timing and objective. He knows the importance of human relations in business and industry. He has, moreover, a key to the promotion of good human relations. This key is a knowledge of what people want from their jobs; in fact, from life itself. He knows that people want recognition, a sense of belonging, and security in their jobs; and he is prepared to help both employees and super-

visors arrange working conditions so that employees, from executives to unskilled labor, satisfy these basic wants.

He also knows that managements and supervisors who satisfy these basic wants can lead and manage employees. He knows that employee disinterest, apathy, negativism, quarrelsomeness, suspicion, and even rebelliousness come from failure to have these simple basic human needs satisfied.

Training Director E is one of the most important men on the staff. His position is strategic, inasmuch as he and his assistants make more contacts with more workers of all levels than most of the other staff men combined. Training Director E knows that top management needs an intelligent ear and a wise interpreter, and that it will pay high in status and backing for these qualities. Through frequent contact with employees of all levels, Training Director E and his men can be the first to find, and to start correction of, faults in organization structure, potential and actual grievances, and personality clashes among employees and executives. E recognizes, too, that the job of administrative coordination of an industry is tremendous. He sees that in exercising his training functions he can at the same time help top management in coordinating departments and key men. Consequently he takes advantage of his peculiar position within the organizational structure to aid the manager, the superintendent, and staff men in research, sales, costs, legal, and other divisions.

Training Director E's training scope is as broad as the number of persons in the plant; it is as high as their individual and collective need for improvement in any skill, knowledge, attitude, or appreciation.

We do not want to leave the impression that the activities of Training Director E are typical, for they are not. The usual picture is one of limited scope, as in the case of Director A, who emphasizes production skills, or Director B, who ignores skills and works at varied psychological enterprises. Each man limits even his own specialty: A interprets skill as applying only to skill at a machine, omitting supervisory and organizing skills; while B trains for attitude through a few such isolated devices as the plant paper and employee counseling, but omits such factors as instruction in company policy, sound supervision, and fair management—factors which profoundly influence attitudes of both workers and supervisors.

Management's Concept of Training.—At his management conventions and in his reading, the average industrialist has been bombarded by appeal after appeal to face today's great human relations problems with realism, and by dire threats of disaster if he fails to

do so. He has been convinced that both public and employee relations have been mishandled, that he must correct this situation, and that he must join others in paying a penalty for past mistakes. Again and again he has been confronted by the picture of wrathful workers and a hostile public, both determined to punish good and bad management alike for errors in human relations.

How shall this threat be met and future mistakes be avoided? It is frequently recommended that business institute a system of training, or industrial education. As a result, the conscientious but busy president of the firm passes the word down that training must be emphasized more than it has been in the past. If the firm happens not to have a training department with that designation, the president gives orders that one be established. Perhaps the president or lesser executives even specify certain goals toward which their training men should work. These instructions usually are brief and perhaps none too definite, typical examples being to "tell the worker," "educate the employee," "change that attitude of distrust for management," "show workers what we are trying to do," "get them to believe in us," "give them the *will* to work," or "show them we really are not at cross-purposes."

In other words, modern management has been sold on the need for training without having a clear idea of what it is, what it should do, or how it should operate within the over-all company structure. This throws full responsibility upon the training director, whose concepts may be no more adequate than those of our anonymous Directors A, B, C, and D. At the same time, it may rob even the ideal director of the power to do an efficient job.

The reason for this becomes obvious when we analyze the factors that make Training Director E successful. First, of course, is his broad understanding of the nature, functions, and importance of a training program. Next are his technical skill and executive ability, with which he organizes his program and makes his department function effectively. Last is his authority, which enables him to put his program across without fear of neglect, executive interference, or willful sabotage.

The director whose superiors merely feel that training is desirable is not likely to receive E's authority. Although he may be strong enough on the lower levels, what will his position be if the kind of training his company most needs is education and reorientation of high-level management? How much support will he receive if some supervisor, superintendent, or office manager declines to be trained or declares that training of management is so much presumptuous non-

sense? With what confidence can he carry on if some supervisor or divisional superintendent resents training of production employees as a slight to his own authority and looks upon it as meddlesome interference?

Training is a vital activity, a remedy for past mistakes, and a tool for future achievements. Top management—the president, the chairman of the board, the directors—must understand this, and must gain some clear conceptions of the nature, scope, and requirements of a successful training program. This will necessitate many hours of studying, administering, and following through on problems of industrial education and the functions of the skilled training man. Without this, management hardly can give the training director essential authority, or come to him for aid and guidance as freely as it expects workers to do. It also will not be in a position to select a man whose viewpoint and ability measure up to his job.

Why Concepts of Training Vary.—The great variation in scope and organization of training programs is due primarily to (1) a confusion of aim, and (2) a confusion of judgment as to what range, emphasis, and organization of effort will carry out the aim.

The variation exists because the *aim* of any activity determines its size, range, and organization. The aim of an army at war is to overcome resistance. The army's size is determined by an estimate of the force necessary to accomplish the aim. The scope is determined by a selection of areas in which combat must be carried on in order to accomplish the aim. Organization is determined by making that arrangement and distribution of men and materials which will contribute most to the accomplishment of the aim. In this and all other activity, matters of size, range, and organization relate invariably to purpose.

The Aim of Training

Before stating the aim of training and before discussing the factors which dictate this aim, we must examine the activities of Directors A, B, C, D, and E to determine where agreement among them as to training purpose is implied.

What is common to the concepts and activities of the training directors mentioned at the beginning of this chapter? When we strip away each interpretation which varies from any other, there is left only one small bit of common core: Training deals with systematic development. Training directors certainly are not consistent among themselves in what they want to develop or what they think they

should develop, but they all agree that something should be systematically developed in employees. What slim thread other than the process of systematic development can bridge the great gap existing between a vice-president absorbing the trends in profit-sharing plans and a worker absorbing the ability to beat metal into prescribed shapes?

Next comes the question : Systematic development in what? Here is where most of the training directors seem to disagree. If it is true that the function of training is the systematic development of personnel, then we can safely say that *all* planned and guided growth of personnel needed in industry is the logical responsibility of training, not just growth in ability to operate a lathe, not just systematic indoctrination in the facts of company rules and regulations, not just management seminars for increase in knowledge of national economic trends, but *all* systematic development of personnel needed in the industry.

The next question is: In what areas is systematic development of personnel needed in business and industry? The answer is that need exists for systematic development of personnel in knowledge, skills, and attitudes. Growth of all employees in each of these three areas is essential to a well-rounded and sound educational program.

Examples of Knowledge to Be Developed

1. Company products
2. Company policies
3. Company history
4. Company rules and regulations
5. Company problems
6. Company plans
7. Raw materials
8. Waste control facts
9. Cost reduction facts
10. Safety facts
11. Economics of industry
12. The American system of free enterprise—rights, privileges, and duties
13. Technical knowledge of machines, mechanical theory, strength of materials, etc.
14. Competitors
15. Knowledge of social skills and cooperation
16. Motion study and wage systems
17. Knowledge of one's own strengths, weaknesses, and needs
18. Principles of management

Examples of Skills to Be Developed

1. Basic job operation skills
2. Punching time clock

3. Disciplining
4. Giving orders
5. Receiving orders
6. Winning friends
7. Self-analysis, direction, and improvement
8. Waste control
9. Cost control
10. Cutting waste motion
11. Conference participation
12. Conference leading
13. Writing notices
14. Speaking clearly and persuasively
15. Job organization, time budgeting
16. Cooperative development of policy
17. How to write up suggestions
18. Reporting absences
19. Making job breakdowns
20. Administrative skill—planning, organizing, commanding, controlling, and improving

Examples of Attitudes to Be Developed

1. Appreciation of company policy and procedure
2. Sympathy with company problems and desire to help
3. Willingness to work
4. Understanding and cooperation with supervisors
5. Understanding and appreciation of employee position and problems
6. Group spirit
7. Feeling of responsibility for waste, cost, welfare of company
8. Feeling of satisfaction, security, belonging, togetherness, individual and group importance
9. Feeling of participation in management
10. Appreciation and feeling of interdependence of employee and company
11. Desire to have high record of attendance, production, and safety
12. Appreciation of rules and regulations and desire to comply with them
13. Feeling of friendliness and ease in work environment
14. Department spirit—pride in work, product, and workers
15. Identification of employee with company
16. Feeling of pride in company
17. Feeling of worthwhileness of work and position
18. Interest in welfare, success, and satisfaction of all employees

Next comes the question: Does the necessity for development of knowledge, skill, and attitude apply to employees, to supervisors, or to top management? What levels of workers need constant, planned development in ideas, skill, and appreciation? The answer is, of course, that it is needed in all levels, from the sweeper to the president. The personnel director may need to acquire skill in democratically developing and writing policy as much as a beginning machine operator needs to learn the skill of his job. The supervisor may need

THINK

IBM DEPARTMENT OF EDUCATION

THINK

Enrollments Completed and in Session May 1947											
Divisions & Courses	1945	1946	1947 Date	Total to 1916- '47	In Ses- sion	Divisions & Courses	1945	1946	1947 to Date	Total 1916- '47	In Ses- sion
General & Vocational Education						Business Education					
Endicott						Customer Administrative					
General	1,167	864	642	11,021	769	IBM Accounting for Executives	190	216	133	3,805	49
Occupational	1,068	1,525	943	27,798	612	IBM Accounting Supervision ..	276	290	135	1,150	48
Management Training	66	148	118	3,694		IBM Manufacturing Control ..	295	193	74	1,002	48
New York World Headquarters						Special	314	551	133	2,960	60
General		495	94	589	339	Sales					
Occupational		123		137	200	EAM, ET & ITR Sales	170	844		3,948	18
Poughkeepsie						Systems Service	248	86		1,094	
General	663	134	126	1,823	105	Special		455		1,241	
Occupational	1,350	258	433	6,425	355	U.S. & Canadian Branch Offices					
Management Training	65	5	70	824	12	IBM Key Punch Operation	6,942	7,629	1,953	81,717	676
San Jose						IBM Machine Operation	7,881	9,585	2,329	83,078	810
General	33	2		35	12	Special	301	328	56	2,740	31
Washington						World Trade Division					
General	58	22	53	331	73	Latin America					
Occupational	65	20		85	17	Argentina, Brazil, Chile, Colom- bia, Costa Rica, Ecuador, Guate- mala, Mexico, Netherlands West Indies, Panama, Paraguay, Peru, Puerto Rico, Venezuela					
Management Training				68	18	Europe					
Canada						Belgium, Czechoslovakia, United Kingdom, France, Germany, Hungary, Italy, Netherlands, Poland, Spain, Switzerland	903	1,044	93	5,604	698
General	175	97	37	382	24	Pacific					
Occupational	60	71		217	48	Hawaii, Japan, Philippine Islands					
Extension				36	3,036	U. S. War Veterans	708	3,625	974	5,390	1,517
Electronics											
Engineering Education											
Customer Engineering	188	819	79	5,987	92						
General Engineering			5	49	26						
Watson Scientific Computing Labora- tory			62	62	20						

"THERE IS NO SATURATION POINT IN EDUCATION"—Thos. J. Watson
Form 1. Extent and Types of Training Offered by the International Business
Machines Corporation

to learn the simple but vastly important skill of letting words and action flow out of principle and policy rather than out of arbitrary whim or expediency. What difference is there between the need of a production employee for company information, history, plans, and problems and the need of a supervisor for this knowledge? Only a difference in how much, and a difference in the manner of presentation, but the need exists for all. A given supervisor may need to feel that he is a participant in management as much as a given employee needs to develop a feeling of worthwhileness. The plant president may need a few simple rules in his job of coordinating or delegating as much as an employee needs to know how to reduce waste on his job. We all need perpetual, directed development toward sound, prescribed ends of knowledge, skill, and attitude.

For us, the definition of training or industrial education in business and industry is

The continuous, systematic development among all levels of employees of that knowledge and those skills and attitudes which contribute to their welfare and that of the company.

The aim of an industrial and business training program is

To build continuously and systematically to the maximum degree and in the proper proportion that knowledge and those skills and attitudes which contribute to the welfare of the company and the employee.

Although there is nothing new in this aim, the full achievement of it has been badly missed in industry because we have limited ourselves so largely to one aspect of it—the development of physical, mechanical, and motor skills—while neglecting the equally important social, emotional, and economic aspects of industrial life. The current industrial situation offers irrefutable evidence of the inadequacy of previous limited approaches, both in industrial training and in formal public and private education. The failures in our industrial system arise not because workers and managers are lacking in technical and trade skills, but because they have not mastered, and generally have not even seen the need for, the more difficult and more fundamental social attitudes and skills. Their significance and necessity are becoming constantly more apparent and daily more urgent.

Training Must Change from Emphasis on Machines to Emphasis on Persons.—The future of training in American industry will depend largely on the success with which training departments change from major emphasis on skills and technical training to major emphasis on the systematic development of employee attitude and knowledge.

Some training men do not realize or believe in this new emphasis, or are unable to adjust themselves or their programs to provide for its development. But training of this latter and broader type is what the leaders of industrial education have in mind when they envisage the solution to our present strife and misunderstanding, and the strengthening of the free enterprise system through education.

The vital need for training to develop attitude and knowledge does not mean, of course, that operator skills and technical knowledge can be forgotten. It does mean that training directors who restrict their major activities to these fields will soon be relegated to positions of minor importance in a larger training administration which necessity and the trend of the times will bring upon them.

We must remember, too, that methods and techniques in mechanical, technical, and manual training are already far advanced. Methods and techniques in attitude building are now far behind them. If as many advances can be made in attitude-building technique and method during the next ten years as were made in the field of motor skills and information training during the war years, the American system of free enterprise should be safe enough. A good training director in a progressive industry can, with small effort and only part of his time, administer a highly effective manual, technical, and mechanical training program. He may then devote his major time and effort to the more important problem of building in employees such attitudes as understanding, cooperation, will to work, pride of accomplishment, confidence, and feeling of security, which are sadly lacking in the industrial picture today.

Summary

Great differences exist in the activities of various typical training directors, and in the concept and scope of their training programs. These differences exist largely because there is confusion as to the aim of industrial training and the purposes of training programs. The aim proposed is: *To build continuously and systematically to the maximum degree and in the proper proportion that knowledge and those skills and attitudes which contribute to the welfare of the company and the employee.*

Many training departments fail to meet the aim set forth in these respects: (1) Their programs fail to cover all employees and all management. (2) Many training departments limit their scope to one or a few areas of training, such as machine skills or technical training or management assistance. (3) There is a strong tendency to overemphasize those activities from which modern training de-

partments have evolved—that is, machine skills, technical training, superficial and sporadic supervisor training. (4) Many training departments do not accept responsibility for the perpetual and systematic improvement of all individuals in the business, particularly in their social skills and attitudes. The social goals of cooperation, understanding, will to do, and the like are of first importance. Training departments must become proficient in the development of these attitudes and must place highest emphasis on them.

PART II

ORGANIZING, INSTALLING, AND ADMINISTERING A TRAINING PROGRAM

CHAPTER 3

POSITION OF TRAINING IN COMPANY ORGANIZATION

Who Is Responsible for Training?

Before we can discuss the position of training in the company organization, we must determine who is responsible for doing the training. All businessmen will agree that training of new and old employees is, first of all, a responsibility of management. Modern commerce and industry cannot rely upon unplanned and undirected learning by trial and error. It is too slow and too costly in time, energy, and results. All managements follow some policy, more or less deliberate or formalized, for training new employees in basic initial skills and old employees in more advanced skills.

In the simplest arrangements, management merely delegates the responsibility for training to department heads and supervisors. Executives assume, perhaps erroneously and naïvely, that new men will be trained by the supervisor or by someone chosen by him, and will not be left unassisted to learn through costly errors and experiments. Under this simple, even rudimentary plan the supervisor is fully responsible for training; he may delegate some of this responsibility to subordinate supervisors or workers, but it is his duty to see that training is done.

In companies with extensive, professional training setups, management has gone further than mere delegation of its responsibility for training; it has organized a specialized staff training department to advise and assist the supervisor in his training work and, in some more advanced plans, to do much of it for him. But the basic responsibility does not change so far as the working force is concerned; the supervisor still must see to it that training is carried out.

The Five Basic Patterns for Doing Training

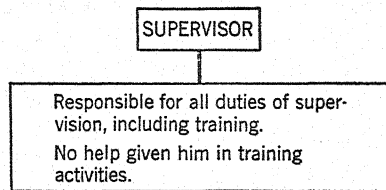
Five basic organization patterns for training are current in present-day American business. The major difference in these five plans lies in the person or department responsible for doing the training. The

responsibility for seeing that it is done remains, except in plan five, completely with the department head.

1. **The Supervisor Trains Without Assistance.**—The first of the five basic patterns is the very simple one wherein management expects supervisors of all ranks to train those beneath them without special help. Sometimes this expectation is made clear by inclusion in written statements of duties; more often it is not, and management does not go much beyond expecting. It holds the supervisor responsible for getting the work out and for all acts necessary to that end. If the supervisor thinks training will help, he is responsible for providing it. It is assumed that he will be interested in training and be able to train effectively by virtue of his position.

Except for delegation of responsibility, this can hardly be called a plan or organization for training. It provides the supervisor with no specialized assistance—neither line, staff, nor service—to help in the work. Weak though this method is, it is typical of most American business and industrial units today. The first line supervisor trains all workers who report to him. Supervisors, in any echelon, and this includes managers and executives, train those beneath them and see that these supervisors in turn train their subordinates. This plan is presented graphically below:

ALL TRAINING DONE BY SUPERVISOR, UNAIDED



The primary advantage of this plan is that training, being done by one so closely related to the job, can be realistic, practical, and meaningful. It will take place on the job, and in the same situation in which the learner will use his skills. There is little or no separation of learning and doing. Since the training will be done by the supervisor in charge, there can be little chance of error in teaching wrong practices, and also little infringement upon his authority.

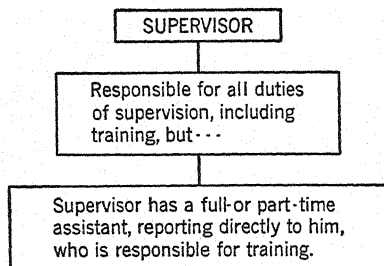
On the other hand, a supervisor may not see the need for teaching nor the advantages of organized training over those of trial-and-error learning. He may therefore ignore the trainee, leaving him on his own. If the supervisor came up the hard way, he may think that his subordinates should do the same. Still worse, he may be a poor or

unwilling teacher. Many supervisors think they are too busy to teach, and they lack the professional aids and techniques which make learning fast and economical. Moreover, there are some forms of training which are better accomplished in groups and away from the job.

Where plan one is in operation, training is confined almost wholly to manual or mechanical job skills. There is little orientation, induction, attitude building, or related and general training. It is a primitive plan, which is wholly inadequate for modern management.

2. Supervisor's Assistant Does Training.—Other companies provide the line supervisor with a special training assistant who spends all or part of his time in teaching. This assistant reports to the line supervisor and may be taught to teach by some outside agency, by a staff training department within the plant, or, if the supervisor is competent, by the supervisor himself. This system is followed by a large electrical goods concern and by a nationally known cable corporation. In these organizations each foreman, department head, or major supervisor has reporting to him one full- or part-time assistant who serves as training instructor.

ALL TRAINING DONE BY ASSISTANT TO SUPERVISOR



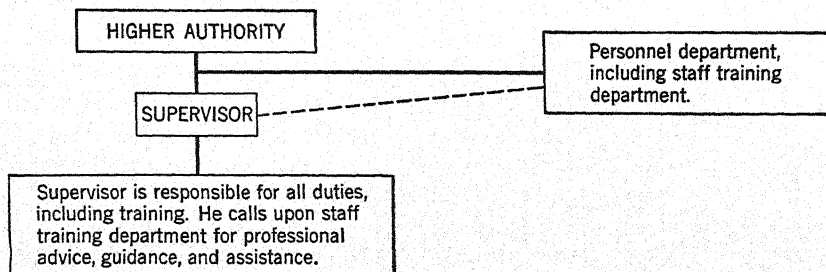
Plan two is not a common one; it is sometimes followed where there is a large staff training department, or where there is no distinct training department at all. This plan, which gives each supervisor a training man in his own department, has the advantages of plan one and some of those of plan three. Its weakness lies in the fact that unless there is a staff training unit to prepare and guide him, the assistant is seldom a qualified teacher. He is frequently an operator, crew chief, or minor office head, who has been given the training responsibility. Where the assistant is well chosen and carefully instructed in how to teach, the plan may provide adequate training in trades or semiskills, or it may serve for the simplest aspects of general education. It seems to be an improvement on plan one.

3. Supervisor Does Almost All Training, Coached by Staff and Training Specialists.—Recognizing the specialized nature of the training function, most progressive managements arrange to help supervisors to do the training which has been delegated to them. Under this third plan, some managements establish a staff training department which teaches supervisors to give their own job instruction, to orient new workers, to lead conferences and hold meetings, or to do group teaching in a variety of special subjects, such as waste reduction, the meaning of the union contract, the proper use of office forms, fire prevention, material handling, etc. Supervisors who are to train other supervisors or employees receive from the training specialist instructions in methods of leading conferences and in doing job and classroom teaching.

The departmental supervisor himself orients new workers in department rules and regulations, and in company history, policy, and traditions. The training department prepares the supervisor to do this by having him attend one or more conferences on orientation and induction led by some other supervisor. Following induction, the supervisor teaches each new employee the skills involved in his job. If there is a vestibule school or organized trade or business school, a foreman or supervisor does the teaching.

In this setup the supervisor, foreman, or department head does his own training after he has been prepared to teach by a training specialist. Such a specialist usually does little actual teaching beyond preparing line supervisors to teach. He is a *teacher trainer*; he helps supervisors to set up training programs, and he guides and counsels in training activities. Among the various ways of operating organized training, this is probably the most common form.

TRAINING DONE BY SUPERVISOR, ASSISTED BY THE
STAFF TRAINING DEPARTMENT



This plan has nothing to recommend it unless the training department is staffed by professional educators—high school teachers, prin-

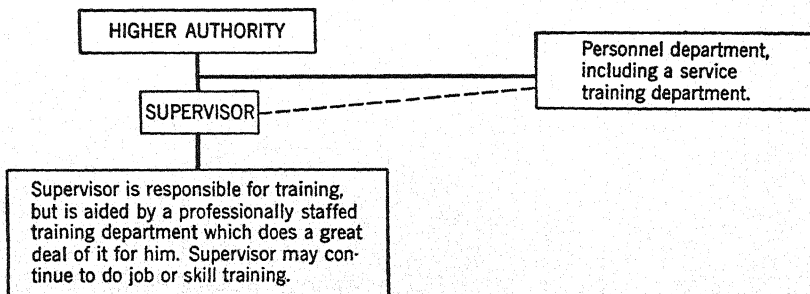
cipals, or professors from a school of education. If plan three is to work, it requires a professional educator serving in a staff position as advisor to those who know the jobs and who are used as teachers. Too often in this situation training is headed by someone who has some technical specialty other than training—costs, industrial engineering, sales, or foremanship, for example. Such a person cannot adequately prepare others to teach or effectively supervise their performance.

The major disadvantage of this organization is that it draws too much upon the supervisor's time if he is to learn how to teach effectively. It is almost impossible to make good teachers from production men and department heads unless more time is taken for the job than is available at present. Again and again, supervisors who probably know their own jobs fail as teachers because they have not been adequately trained by the staff training department.

4. Most Training Done by Staff Assistant at Request of Supervisor.—Training may also be organized like a service department. In this case it is assigned much of the responsibility for actually doing the training instead of preparing supervisors for this work. Under this plan management sets up a small unit of professional teachers who, at the request of supervisors or department heads, will organize and teach almost any subject or skill. Where they are unable to teach some specialized skill, they will select and prepare others to do so, as in plan three.

Even under this plan training remains the responsibility of the line organization, since the service department renders assistance only upon request.

MOST TRAINING DONE BY TRAINING SPECIALISTS

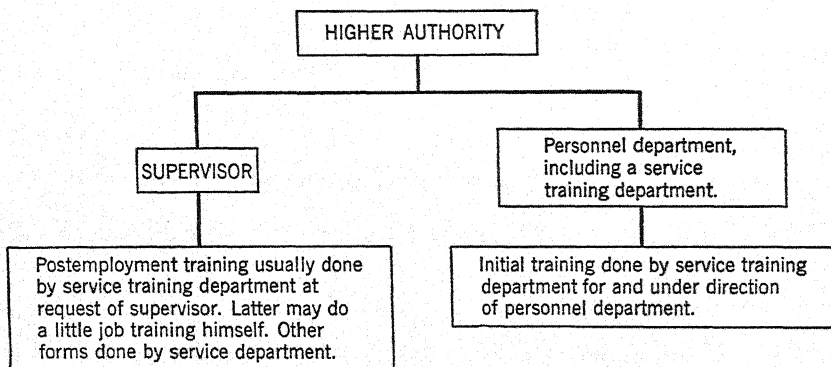


Where plan four is followed, more and better training is done since full-time instructors, unlike supervisors, have no duties other than teaching. Another advantage lies in the fact that it seems easier

under this plan to obtain and to use professionally trained teachers. Teaching is therefore quicker and more effective, involving less waste of time and materials in learning. The chief difficulty is that of follow-up. Where training is a service function, moreover, excellent relations must be developed between training and line supervisors so that training can assist the line activities in following the training program through to effective use. This plan seems to be growing rapidly in popularity.

5. Initial Training Done by Training Department Before Employee Reports to Supervisor.—The only other clearly defined arrangement for training closely resembles plan four. Training in this case is also a service function, the teaching being done by full-time specialists; but it is not a direct service to a supervisor and it is not always done at his request or that of a department head. It is

MOST TRAINING DONE BY TRAINING SPECIALISTS
BEFORE TRAINEE REPORTS FOR WORK



often done before job placement by a personnel or industrial relations department; employees or trainees remain under the supervision of the personnel department and sometimes on its payroll until the training period is ended. This is often the case where training is done in complete company schools or where there is intensive vestibule training, both taking place on company property. It is also followed where there is a large amount of off-reservation or out-of-plant training. In this situation, the supervisor remains responsible for whatever on-the-job departmental training may be necessary after the initial training. This, however, is reduced to a minimum, since much has been accomplished before the worker reports for work. Wherever any significant amount of training is necessary after the

worker so reports, as in upgrade training, the supervisor may call upon the service training department to do it for him.

Plan five frequently prevails in governmental units, in large companies, or wherever large blocks of workers are hired at one time and at regular intervals. The Red Cross trains field directors in this way; a large insurance company gives its agents their initial training in the same manner. The plan works best where considerable initial training is necessary.

Plan five frees the supervisor from general training more fully than does any other. It is useful where supervisors are overworked or where considerable preservice training is needed. The major difficulty is that many supervisors do not recognize that some on-the-job training must be done in addition to initial, continuing, and upgrade training. All too often, supervisors expect fully competent employees to arrive on the job, and they do little to help those whose skill remains inadequate.

These five plans describe briefly the major arrangements for training. Plan three appears to be most frequently found; plans four and five seem to be more effective and growing in popularity. All sorts of combinations of these plans exist.

Division of Training Responsibility Between Line Supervisors and Personnel

The five plans just reviewed differ primarily in placing responsibility for doing the training. In one extreme, plan one, full responsibility for seeing that training is done and for actually doing it lies with line supervision. In contrast, plan five places much of the responsibility for seeing that training is done, as well as for doing it, upon a staff and service department. The other plans reveal varying division of responsibility for doing training between line and staff personnel.

How much management expects its line supervisors to do in training depends upon how it generally divides responsibility for its other personnel functions. One nationally known concern believes that its responsibilities to the worker include the following:

1. Developing among its supervisors a feeling of responsibility for the individual workers.
2. Giving to each worker a feeling of individual importance.
3. Recognizing each individual and rewarding him when reward is deserved.
4. Making each worker feel wanted and secure in both personal and job matters.

5. Giving each worker the information he needs about the company, his job, and other matters.

Management expects all supervisors to carry out these responsibilities in their day-to-day contacts with workers. In the company as a whole, management expects the personnel department to plan, control, coordinate, administer, educate, and serve in these matters.

Notice the last sentence. Personnel is expected to plan, control, coordinate, administer, educate, and serve in these matters; only doing the job is omitted. This delegates a heavy burden to personnel. It is characteristic of a progressive trend, one which elevates the personnel department—and therefore training, which normally belongs in it—to the position of effective influence that it has long deserved. The concept of the personnel department offering training as a staff function with no power beyond weak and apologetic advice is breaking down; management expects results from the department and gives it responsibility accompanied by authority. Taking “education” to mean “training,” this company assigns the actual doing to line supervisors, but reserves authority for planning, controlling, coordinating, and administering to the staff department. Some companies go even further, as in plans four and five, and assign much of the actual work of doing training to a staff training department.

Where Should the Training Department Report?

Under plans three, four, and five the training department is considered to be a staff or service department. Much controversy occurs over where such a training department should report. In most cases it reports to a personnel or industrial relations director. In a significant number, however, it reports to a works manager or a production superintendent.

Three principles, if followed, will help to determine where the training department should report. One of these principles seems to be misunderstood or generally not accepted. It will be presented and discussed first. Then the other two principles, already well understood and generally followed, will be stated without discussion.

The authors believe that the first principle is: *Training should be placed in a division that handles functions similar to those of training and that aims at similar objectives.* This is the well-known organizational principle of homogeneous assignment which, if followed, will place training in the personnel department. According to our concept of training—namely, to encourage and guide the

growth and development of employees—the training department could hardly report elsewhere. This concept can be understood more readily when it is realized that the aims of training and the aims of personnel are similar ; and, consequently, activities that have common objectives should be grouped together under one administrator. We believe that the objectives of the personnel department should be :

1. To have working for and with the company the most capable men and women available.
2. To place each individual on a job in which he can make the best possible use of his present abilities.
3. To discover and release through training additional but latent abilities and powers of all employees.
4. To make sure that each person is considered as an individual standing on his own dignity and merit, and to discourage proposals not in the best interests of employees.
5. To help insure the company's good standing with the public.
6. To help provide and maintain a safe, clean, comfortable workplace and a healthy working force.
7. To help employees solve the problems of living and increase their security and happiness.
8. To inspire and secure cooperation of employees with each other and with management ; and to bridge the gap between top management and employees by arriving at common understandings of worker and company desires and needs.

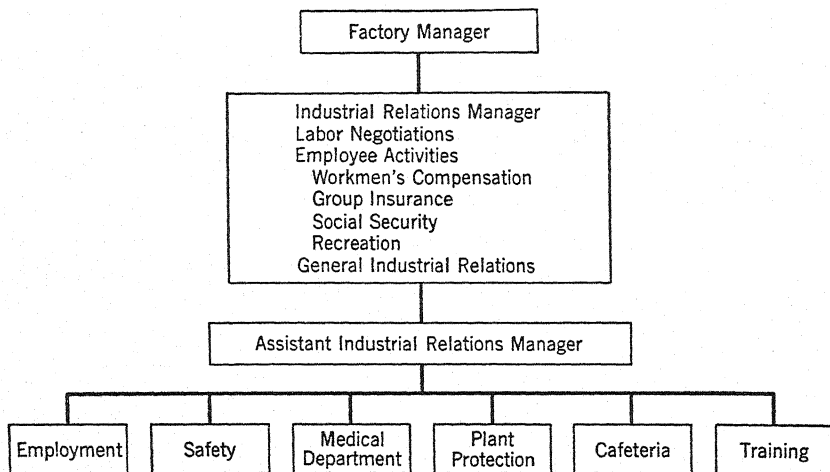
These objectives are intimate, personal, individual, and human. They are similar to the goals which modern training men and their managements have established for business and industrial training.

If the principle stated above is followed, it will go far toward placing training where it can perform most effectively. Two other less controversial principles also offer guidance: *Training should be placed where it can most easily serve all units of an organization—sales, office, research, legal, and traffic, as well as production.* If it is centered in any one of these units, it may be inclined to devote major attention there and find more difficulty in serving the other units than if it is centered in personnel, a staff unit outside of any one of them.

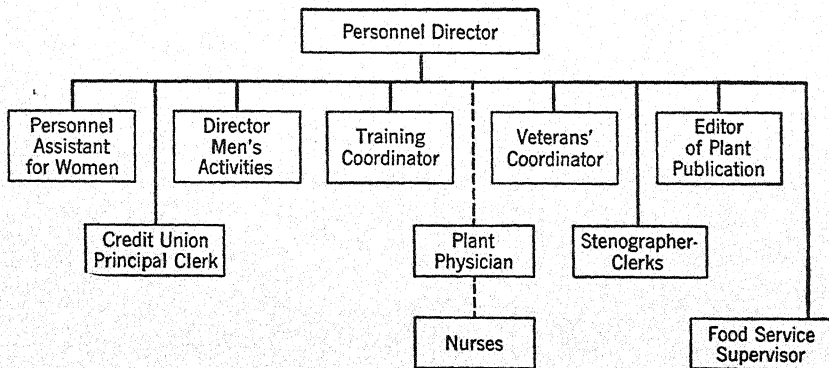
The training director should, if possible, report to a man who is well respected in the organization, who has prestige and standing, and who is willing to risk that prestige in support of sound training activities, regardless of criticism or resistance.

Place of Training in the Organization

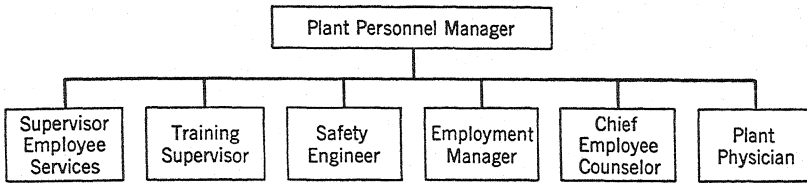
In the examples that follow, training is organized and administered in the personnel department. This is the most common arrangement. A national training directors' society recently conducted a survey and discovered that 83 per cent of the companies surveyed considered training to be a personnel function.



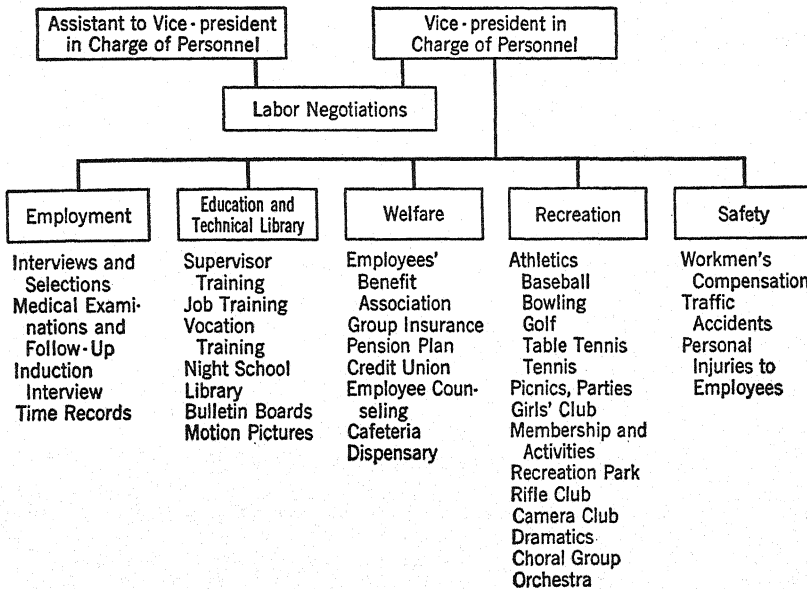
Form 2a. Industrial Relations Personnel and Organization—Johns-Manville Corporation, Manville, N. J., Factory (approximately 3,000 employees)



Form 2b. Personnel Department—Owens-Illinois Glass Company (approximately 400 employees)



Form 2c. Personnel Department—Armstrong Cork Company, Lancaster Floor Plant (approximately 7,000 employees)



Form 2d. Personnel Division—Dayton Power and Light Company (approximately 1,200 employees)

Summary

There are five major organizational plans for business and industrial training. Each plan has its own philosophy, its own special purpose, and its own adherents. The writers recommend that any business contemplating the installation of, or now having, a training program decide which one of the five patterns is most likely to give full service in its own situation.

Under plans three, four, and five, training aims are more closely related to personnel aims than to those of the legal, sales, research, production, or finance department. Therefore, if any of these plans

is used, training should be assigned a place in the personnel or industrial relations department.

SUGGESTED REFERENCES

Organization of Personnel Administration, Conference Board Reports, Studies in Personnel Policy No. 73, New York, National Industrial Conference Board, Inc., 1946.

How to Establish and Maintain a Personnel Department, AMA Research Report No. 4, New York, American Management Association, 1944.

CHAPTER 4

WHO SHOULD TEACH?

What Is Teaching?

Teaching is the heart of the training program. It is to industrial training what direct labor is to production, and what the sales interview is to selling. Except for costly, unguided trial-and-error learning, it is the only activity that can result in desired new ability. Nothing else—neither course outlines, conferences, nor the physical arrangements of the classroom—is half so important. The value of a doctor to a sick man comes in his therapy, not in his pills and paraphernalia. The value of a training program lies in the teaching, not in synthetic formulas, texts, and training aids. The teaching act itself therefore deserves major attention. But in training departments all over the country the attention given to teaching itself is minor and inconsequential in relation to its importance. Let us therefore turn our attention back to teaching and study the intimate, planned, and guided relation between the learner and the person who is stimulating and assisting him to learn.

Teaching involves arranging classrooms, subject matter, presentation, participation, practice, and even trainees, so that desired changes in work habits and job attitudes result. Teaching involves setting situations which stimulate desired learning, and this includes setting the social and psychological situation as well as the physical arrangements.

Teaching is a complex activity. It includes the development and use of learning aids and decisions regarding when and how to use such aids. It requires an ability to improvise, extemporize, and adapt when standing before a class. Nobody can be prepared in advance with easy formulas to answer all of the learners' questions. The good teacher adapts trainee contributions and improvises pleasantly and effortlessly, but always on his major theme. He makes unexpected class contributions meaningful and profitable to all. There are no simple devices or short training programs which will make such a complex activity easy for a cost accountant, a district sales manager, or an industrial engineer. This ability is part of the art and science of teaching and can seldom be expected from specialists in other fields,

many of whom are struggling unsuccessfully with a teaching burden today. Poorly done—and much teaching in industry is poor—it is worse than useless, for it discourages learners from further self-improvement and antagonizes them against the instructor, the program, and the management.

Teaching, the most important act in the training program, is a complex professional function. It may result in intangible values, difficult to observe or measure. It is not subject to close formulas, and it must be highly individualized. Good teaching is far more difficult than the repetition of canned lectures or the presentation of pseudo conferences found too often in industry.

A passage from Barzun's *The Teacher in America* helps to illustrate further the point that teaching is a complex technical job. These paragraphs deal with the discussion group or conference, which is the most generally used technique in industrial training today.

Handling a discussion group requires a special talent, too. Here the drama is more subtle but equally imperative. The hour's discussion must not go off in all directions like a leaky hose. It must have a pattern, beginning at a given point and logically reaching another, from which to start again the next day. Now it is relatively easy to impose a pattern on a lecture; the scheme of it can be written out beforehand and even memorized, because no one will interfere with it. But in a discussion, every one of twenty-five or thirty men has a right to shove the tiller in any direction he pleases. Since there must be an atmosphere of freedom, the instructor must not act like a priggish moderator with a gavel. He must be willing to go up sidetracks and come back. His imagination must swarm with connecting links, factual illustrations, answers to unexpected questions. He must moreover know how to correct without discouraging, coax along without coddling. Every once in a while, a group of men will contain a crank or a fanatic; he must be turned to good teaching use without being made to feel a goat. Every once in a while, the class will want to take the bit in its teeth and hold a political or ethical debate, none too close to the issue. This must be tolerated. Every once in a while, the instructor will feel so strongly on a given matter that he will want to lecture. This must be nipped in the bud.

An advanced discussion group—say twelve men in a senior colloquium in economics meeting for two consecutive hours—is a test of any discussion leader. His role is that of an orchestra conductor, except that neither he nor his men have a score before them. Yet the result of the evening's noise must be as intelligible as a symphony. This takes mutual accustoming on the part of the leader and led. Calling on the right man for the right thing, balancing opinions, drawing out the shy and backward, keeping silent so that the group itself will unwind its own errors—and doing all this in the casual “colloquial” manner which the title of the course prescribes—is an art that only comes with long practice.¹

¹ Jacques Barzun, *The Teacher in America*, Boston, Little, Brown & Co., 1946, pp. 40-41, and the Atlantic Monthly Press.

The Stimulation of Learning

The stimulation of learning—the awakening and maintenance of a will and a desire to learn new outlooks, new jobs, and new methods—is one of the most important functions of good teaching. This is, in a sense, a selling job and the need for it in industrial training is great and continuous. This is equally true whether the trainees are unskilled production workers, supervisors, or executives. A good teacher is constantly alert to the need for getting and keeping all his learners enthusiastic in promoting their own advancement. He searches far and wide to find new ways and means to maintain and strengthen the will for improvement. Experienced professional teachers recognize motivation as their responsibility, and they are trained and practiced in providing it. There is the kind of teaching that answers the frequently heard question: "What can we do with old employees who don't want to learn new ways, with new employees who are apathetic or indifferent, or with executives who feel defensive about attending classes?" Many so-called teachers in industry today, however, do not even recognize motivation as their responsibility, nor do they know how to secure it.

It is not enough in business and industry to feel that the learner should want to learn. He should, of course. But if he does not, we must so teach as to create and develop his desire to learn and to improve. The encouragement of this desire must be deliberately planned for and guided by the instructor. In fact, among many measures of the quality of teaching, one is the trainee's enthusiasm for it. This does not mean that all learning must be made easy. It does mean that good teachers make the will to learn so strong that even difficult subjects become easier. And this is only one among the many exacting and exciting jobs of a good teacher.

The successful teacher not only builds readiness for learning but knows when a trainee has become ready to learn. Until the trainee is receptive, he will be as impervious to information as a duck's back to water. Considerable psychological insight is required not only to know how to create this readiness, but to recognize it when it has been established. Trainees do not oblige by saying, "I am ready." The signs are much more subtle; and these signs are immediately recognized by the professionally trained and experienced teacher.

Many of the failures of training in American business and industry come from failure of teachers to motivate their learners. If learners become dull, disinterested, and apathetic, at least some responsibility must be borne by the teachers involved. But this blame

should be tempered since management itself has relied for the most part upon nonprofessional teachers for the accomplishment of a job too difficult for them. An industrial expert in fields other than teaching can hardly be blamed for failing to develop psychological readiness in learners or to recognize it when it has appeared.

The recommendation for increased use of full-time professional trainers applies with greatest force to the teaching of such skills, knowledges, or attitudes as are needed by large enough numbers to set up special classes. The following are examples: company history, methods of conference leading, merit rating, shop mathematics, simple job instruction, reduction of costs, business courtesy, ticket selling, product training, public speaking, report writing, selling ideas, and hundreds of other similar units.

Who Teaches in Business and Industrial Training Today?

There are at least four types of teachers at work in business and industry today.

1. Full-time, professionally trained teachers with degrees in education or with recognized teaching licenses.
2. Professional teachers with similar qualifications but borrowed from the schools or colleges or from other jobs in industry to do part-time teaching.
3. Supervisors, staff men, or production employees, not professionally trained as teachers, who are permanently assigned or hired for full-time training work.
4. Supervisors, staff men, or general employees, not professionally trained as teachers, who instruct occasionally, as the need arises and as their other major duties allow.

It can be safely said that 90 per cent of all teaching in business and industry before 1941 was done by line or staff employees whose primary interest and effort were devoted to some job other than training. During the war years, however, use of full-time training specialists increased greatly because of the need for more training and because it was necessary to train faster and better than ever before. These full-time instructors were sometimes professionally trained teachers drawn from teaching positions in the schools and colleges, and sometimes professional teachers drawn from supervisory or staff positions within the business.

When nonprofessional teachers—such as foremen, superintendents, production workers, department heads, and staff specialists—

engaged in full-time training, they were sometimes prepared for the task by the training director or by one of his assistants, who helped to develop teaching content and who instructed these men in methods of teaching. Such teacher training ranged from one or two hours a year to well-developed programs of one or two hundred hours, the latter being very rare.

Management expects results from training, results which are demonstrated in better morale, better production, lower costs. But it must realize that these results can be obtained only if good qualified trainers are developed. Even under the best conditions of selection it must be remembered that offering nonprofessionals a few ten-, twenty-, or even hundred-hour courses will not make them professional teachers. Teaching has always been recognized as a profession. Business would not expect to make lawyers or doctors out of foremen, engineers, or time-study clerks simply through the magic of a few courses in how to practice law or medicine. It can no more effectively make teachers by this sleight of hand.

Is Nonprofessional Teaching Adequate?—The pattern of using nonprofessional teachers seems to have been current in industry since the late 1890's. Though it may have been practical and necessary then, it certainly is open to question now as an effective and profitable device for modern business and industry. It is time to examine the merits of a custom which most of us inherited and now defend largely because we see no better alternative.

Business and industrial executives and the personnel directors to whom most training departments report are not aware of the utter inadequacy of much that passes for teaching in their plants. One reason for this is unfamiliarity; executives seldom sit through session after session of training. Moreover, management generally has no standards by which to judge the effectiveness of teaching. It has relied for so long upon nonprofessional training directors and teachers with costs, engineering, or sales backgrounds that it probably takes their work as the norm. Actually, such men do not know and cannot be expected to know the methods, materials, and goals of good teaching. They often confuse entertainment with instruction, or unguided trainee participation with full progress in learning.

Who Is Qualified to Teach?

What constitutes a qualified instructor? A qualified instructor must (1) be familiar with the subject or skill or attitude to be taught, (2) know how to teach it effectively, and (3) want to teach it.

Teacher's Knowledge of Subject, Skill, or Attitude.—A person who aspires to teach obviously must know something about the subject, skill, or attitude with which he is to deal. How much he needs to know depends upon what he is teaching and to whom it is taught. One midwestern industry is now teaching atomic physics to its research men and engineers. Another industry is teaching simple percentage to its lead men and prospective group leaders. The knowledge of mathematics required of the instructor in atomic physics vastly exceeds that needed by the teacher of percentage. In fact, the latter probably will not use higher mathematics at all, but will concern himself solely with arithmetic; to ask him to know higher mathematics would be neither fair nor realistic.

Training has failed again and again because of overemphasis upon the teacher's knowledge of the subject, skill, or attitude to be taught. We have considered high specialization, advanced degrees, or success on the job as the best requirements for instructors, and we have slipped into the easy fallacy that the more a man knows about his subject the better he can teach it. This may be true if he is teaching his subject to those who are almost as expert as himself—graduate students in a university, for example. It may not be true at all when one teaches commercial or industrial workers.

Actually, there is grave danger in instruction by specialists who know too much about their subject and too little about teaching. They often rely upon their knowledge instead of upon their ability to *transmit* that knowledge, and therefore they fail to do the latter, which is their task as teachers.

In most of our training classes we must ask ourselves whether we are creating advanced specialists or simple run-of-the-mill practitioners of an art or skill. In many cases we are not even creating practitioners. We are merely building appreciation. Union stewards and foremen in some industries are being taught time study, not with the intention that they should make actual time studies, but in the hope that once they understand what the time-study engineer is doing when he comes into their departments, they will be able both to interpret his activities to the employees and to represent these employees in discussions with the engineer. In short, the foremen and stewards are being trained to appreciate a type of work, not to perform it. In the same way, many companies teach line supervisors the activities of staff departments, such as quality control, safety, cost accounting, industrial relations, and office systems. It is obvious that persons who teach with this objective in mind (and much busi-

ness and industrial training is of this nature) need not be specialists in every field of instruction.

An example of this was furnished by a cost accountant who was invited to teach production foremen. He was supposed to explain the cost system in the particular plant so that the foremen would recognize their responsibility for maintaining accurate cost data, and he was also to show how the cost department could serve the production line. This man was an expert, the head of his department; he not only wanted to do the job but saw its possible benefits to himself and his department. The training department helped him to outline his material and prepare for its presentation. Yet his performance was considered a failure by the foremen. An analysis showed that the man attained none of his major objectives because he had overwhelmed the foremen with details beyond their interest and comprehension. As things stand today, men who know their own specialty inside out and administer it effectively frequently fail to qualify as teachers, but all too often teach. The reason is that we in training have been either too timid to insist upon the extensive teacher training that might make some of these men acceptable teachers, or too lax to organize and offer them this training. Until training men insist that nonprofessional teachers devote one hundred to four hundred hours to teacher training, a great amount of poor teaching must be expected. The four or even ten hours usually given to it can accomplish almost nothing.

But, it is asked again and again, can skill in teaching do the job that specialization may fail to do? To answer this question, let us examine a case in which a professional teacher was asked to teach supervisors and employees what they needed to know about a job evaluation plan developed by outside consultants and recently installed in the plant. The man was a former high school teacher with two years' experience in industrial training. He had little mechanical background and no previous knowledge of incentive or pay systems. He spent two days studying the job evaluation system, reading about the subject as a whole, talking with those who knew it well, and organizing his program. The teaching itself went off smoothly, profitably, and to the satisfaction of the trainees.

Since one of the ultimate objectives of skill training in simple routine operations is the development of speed, we have often over-emphasized the demand that the instructor be able to meet production standards in speed and facility. Actually, in both semiskill and job training, the instructor must know the one best way of doing any job

he is teaching, and he must be able to do that job slowly enough for the learner to recognize steps, key points, and special knacks. Ability to do the job slowly enough is essential. Highly skilled or very fast operators can seldom slow down to the pace required by learners. Moreover, such operators are seldom aware of the special tricks and micromotions that make them successful, nor are they able to explain those movements or show others how to perform them. Teaching skill is more important in instructing the learner than extreme proficiency in manual or mechanical operations; professional teachers are therefore highly satisfactory in teaching modern deskilled jobs.

Many managements, personnel directors, and college departments of industrial education are still living in the days when the only trained employees were skilled artisans and the only training in industry was long-time apprenticeship for skilled trades. They think, therefore, that teachers in industry must know one or more of the trades and that teachers spend most of their time developing intricate trade skills. Today this is true only in a very few industries.

It is not difficult to acquire the background necessary to teach employees modern industrial jobs, such as material handler, visual inspector, stock records clerk, cameron cutter, cashier, receptionist, packager, or operator of an automatic bottle-capping machine. Certainly knowledge of the job is important to a teacher, but a reasonable knowledge of most industrial jobs is not difficult to obtain. In most cases, essential skills can be learned so quickly that it is easier to learn the job than to learn to teach it. This means that fully trained teachers can be used for a wide variety of instruction, learning the jobs or subjects they are to teach as the need arises.

A prominent educator is reported to have stated recently that 90 per cent of the jobs in American business and industry can be learned by new employees in less than ninety days. Many training directors estimate that 65 per cent of the jobs in American business and industry can be learned in thirty days. Corroborative estimates are given in Chapter 16. Moreover, training men are now preparing employees for many jobs of this sort. Short, well-organized courses have been prepared for teaching office filing, telephone operation, letter writing, first aid, fire prevention, material handling, warehousing, carloading, lifting, interpretation of union contracts, labor legislation, grievance handling, soldering, radio wiring, carbon sealing, machine oiling, various forms of sewing, packing, visual inspection, and so on. If a professional teacher lacking job skills is employed in a training department, he can learn quickly the operations he is called upon to teach.

Knowing How to Teach.—It goes without saying that the teacher must know his trade, which is teaching. Teaching is communicating; it is passing on ideas, attitudes, and skills. For teaching purposes it is better to have a limited knowledge of the subject and be able to transmit it effectively than to possess considerable knowledge and be able to transmit very little.

What the trainee learns depends in large measure on the skill of his teacher. Yet the majority of teachers in industry today are part-time instructors who come temporarily from other full-time jobs to give a few hours of instruction in their specialty. Their selection is often made casually, usually depending upon who can be persuaded to do the job or whose work load happens to be conveniently low. After selection there may or may not be teacher training, but there cannot be much of it, since the nonprofessional teacher has some other full-time job. Even at its best, the plan now current in industry, which uses as an instructor practically anyone who is available, assumes that almost anybody can become a teacher; and it fails to provide the extensive teacher training necessary to make the assumption a reality.

In the selection of a teacher we should consider teaching aptitude or experience at least as important as knowledge. If we do this, we can revolutionize industrial training results, and for the better. No longer will foremen, industrial engineers, and office managers with little aptitude or training for the job attempt to teach. If they are to be used at all, they will be selected carefully and trained fully by the training department. Once we begin to demand these minimum qualifications, it may then occur to management that it is easier and more efficient in many cases to start with professional teachers and teach them the job skills and business information and attitudes necessary to good instruction. Whether we use more professionally trained teachers in industry or whether we continue to use a large number of staff and line supervisors and technicians, we must insist upon ability to teach in all who undertake the assignment.

Wanting to Teach.—Most people like the profession which they have selected and prepared themselves for. Most teachers who have chosen teaching as a lifework and have prepared themselves for it like to teach. There are those who enjoy communication of ideas, skills, and attitudes. They also enjoy seeing others grow and develop and succeed. They identify themselves with their learners until the success of the trainee is the success of the teacher. Such men and women make good instructors. But there is little certainty that

teachers selected at random from other jobs in business or industry will like teaching as well as they like their full-time assignment. In fact, many of them who are now teaching dislike the job.

Like or dislike on the part of any public performer awakens or dampens the enthusiasm of the audience. The spirit of the teacher, whether good or bad, is contagious. Learners cannot be stimulated by those who are indifferent or mildly hostile to the job at hand, as are some who are today impressed into service.

Those who are too intimate with gears or ledgers, blueprints or formulas, do not easily transfer their interest to people. Consequently, they do not always make good teachers. Other things being equal, that person is best qualified to teach who is most interested in doing so.

Comparative Advantages of Professional and Nonprofessional Teachers

Before deciding whether to use a full-time professional instructor or a nonprofessional teacher, temporarily borrowed or permanently drawn from some other job, it is well to consider the special advantages of each.

Advantages of a Professional Teacher

1. The professional teacher places emphasis upon the learner.
2. He is usually broad, flexible, and adaptable and can teach a wide variety of subjects.
3. He is trained to accept and profit from supervision of instruction.
4. He is usually more capable of developing attitudes than is the nonprofessional.
5. He seldom creates inhibitions among trainees. He promotes group discussion and expression.
6. He has no special bias toward or allegiance to any one department.

Advantages of a Nonprofessional Teacher

1. Use of the nonprofessional broadens responsibility for training to many departments.
2. He knows practical aspects of jobs.
3. He carries more "weight" in teaching a specialized subject.
4. His own ability is improved while he is instructing others.
5. He can teach very technical subjects.

Explanation of Advantages of the Professional Teacher.—There are several advantages in the use of professional teachers, provided that they are competent in their chosen profession. These advantages are:

1. The professional teacher, by virtue of his training, has learned to place emphasis upon the learner. He knows that the learner him-

self is more important than the subject or skill or attitude to be taught. The man is far more important to him than the material or the method or the machine, since it is the man himself that the teacher seeks to change. Moreover, the professional teacher has studied the psychology of learning and the psychology of individual differences, which should help him to effect this change. The non-professional teacher is likely to minimize the importance of the trainee and place his emphasis elsewhere; since he has a specialty in some area, he relies upon his knowledge or skill in that specialty to succeed in his teaching. In so doing he acts to the detriment of speedy and effective learning.

2. The trained teacher is both flexible and adaptable; he therefore is able to teach a considerable variety of subjects. His potential repertoire is greater. Moreover, he is experienced in making and revising teaching outlines, and in most cases he can quickly master enough of a new area to teach it effectively. He knows how to locate and use reference works, sources, and films. He constantly reads new books and magazines, and thereby secures information which keeps his teaching up to date. New courses in other businesses, new events in his own company, new writings, and new relationships develop from day to day, and the professional teacher follows these new developments and includes them in his teaching. This means that the broadly informed professional teacher can instruct in office filing this week, business letter format next week, and cost consciousness or company policies in the next—all without undue effort. One former high school teacher of mathematics who is now in training work taught, during a single year, shipping techniques, blueprint reading, inspection, motor transport, all three "J" courses, warehousing, stock records, standard procedure writing, job analysis, and a full gamut of supervisor training conferences. Such a teacher can adapt himself equally well to the field of routine jobs or semiskill training; he can do many types of training. When nonprofessional teachers are used, every new industrial subject involves a different specialist to teach it, and means that hundreds of people must be trained in how to teach. This is an impossible task. In the ordinary industry there are not that many people with the gift of teaching; and even if they are available, there is not enough time to make seasoned teachers out of them.

3. The professional teacher is familiar with the best literature on self-improvement in his field, and has been taught how to use it. Since he is also accustomed to supervision, he expects guidance, correction, and help from his superior. The nonprofessional teacher

has not had experience with supervision of this sort and is likely to feel that supervision implies that he has done a poor job. He may think that the training director, who first encouraged him to teach, is ungrateful and even dissatisfied with his best efforts.

4. Professional teachers seldom concentrate exclusively on developing narrowly defined skills. They recognize that for every skill there must be an attitude or a will to make it effective, and they have been trained in the methods of developing such attitudes.

5. Workers are not likely to be inhibited when a professional instructor teaches them. They will ask questions or give opinions which they might think would be used against them if the teacher were a supervisor or a technician.

6. Professional teachers have no special departmental bias or allegiance, and so in their teaching they do not overrate the importance of any single department where they may be or may have been employed full time. A professional teacher, who teaches safety today, office etiquette tomorrow, and cost statement analysis the next day, can see the whole industry and the broad picture better than one who may have served in a division involved in the training.

Explanation of Advantages of the Nonprofessional Teacher.—

There are several advantages in the use of nonprofessional teachers, providing that they are (1) carefully selected, (2) thoroughly trained, (3) supervised during their teaching, and (4) given counsel thereafter. These advantages are:

1. Office, technical, or production supervisors, or gifted line employees, know the practical aspects of the job to be taught. There is little chance that they will teach the wrong ways of doing things.

2. The use of numerous instructors, drawn from the staff and line units, distributes the responsibility for training and frequently spreads and intensifies interest in training and a feeling of responsibility for its success. Training has cooperators and defenders scattered throughout the plant.

3. Training becomes authoritative. Trainees feel that those intimately connected with the work have the real answers. There is respect for the man who has done the job; the more fully and successfully he has done it, the more likely he is to win that respect. This is true, however, only if the individual can teach. Far too many managements have felt that trainees will respect a man who knows his subject, regardless of whether or not he can teach it. This is not so. Experience has shown that trainees lose respect for a poor teacher, regardless of his skill as a performer.

4. Teaching improves teachers as well as students, and reliance upon staff and line supervisors and production workers for teaching tends to improve them in their regular jobs. It does so, however, only if their teaching is good.

5. Some technical subjects and trades are too difficult and complex for anyone to teach unless he has mastered and practiced them. Moreover, some departments of commerce and industry have so many different jobs that trained teachers cannot be found to teach them. Here it is necessary to select operators with the greatest promise and prepare them to teach.

How Shall We Assure Ourselves That Our Teachers Know How to Teach?—Training directors and those to whom they report must assure themselves that their teachers, whoever they may be, know how to teach. There are two ways to do this:

1. Select more professionally trained and experienced teachers for the training function. Teach them the industrial skills, attitudes, and understandings they will need, and continue to improve their already developed skill in teaching.
2. Plan carefully organized, continuous teacher training classes to be attended by all nonprofessionals who are called upon to teach. This requires much more than a ten- or twenty-hour course in conference leadership.

Summary

Training directors must insist that only carefully selected and adequately prepared teachers should teach. If nonprofessionals are to teach, training men must develop complete programs to provide adequate teacher preparation. In units of any size, full-time professional teachers should be heavily relied upon for doing teaching in attitudes, general knowledge, human relations, or in unskilled or semiskilled jobs. This represents the majority of training going on in business and industry today. For trade, technical, or professional training, specialists in the field, who are carefully selected, trained to teach, and supervised while teaching, may be desirable. There must be a continuous program for the improvement of all teachers, professional and nonprofessional alike.

CHAPTER 5

QUALIFICATIONS OF THE TRAINING DIRECTOR

Until recently, the training director generally was selected by combing the plant for some popular foreman or engineer—usually one with a long service record and an intimate knowledge of the company's production methods and operations. Before World War II, when labor turnover was negligible and the supply of workers unlimited, training was considered a less difficult and less important service. The functions of the training department were limited to apprentice, vestibule, or other forms of mechanical or motor training. A training director whose experience was limited to mechanical fields therefore could serve acceptably and even well in the limited job assigned him. Today, however, the functions of the training director require familiarity with a wide variety of activities and specialized instructional skills. Since these demands seldom can be met by a man with only trade, engineering, or other technical training, commerce and industry now seek training directors who have specialized in this branch of applied education.

Broadened Scope of Training Requires Higher Competence in Director.—The advent of World War II brought new training needs and, with them, new standards for the selection of a training director. Men and women had to be upgraded and retrained for new and unusual jobs. Since many employees had never worked before, they required the equivalent of years of apprenticeship, know-how, and know-why, crowded into a few weeks or months. Top levels of efficiency for those newcomers had to be reached quickly. So great and so varied were the demands that well-organized training departments held themselves ready to offer lecture, conference, vestibule, or on-the-job training to meet almost any need. This demand upon training has continued and even increased since 1945, although for different reasons. During a single month, line or staff departments have been known to ask a training director to provide instruction in such subjects as social hygiene, proper dress and make-up for female office employees, report writing, elementary fractions, proportion and percentages, public speaking, human relations for engineers, elementary statistics for quality control inspectors, labor legislation, efficiency

rating, fire prevention, cost consciousness, and sewing-machine operation.

The civilian training director at an Air Service Command Station reported recently that he had prepared and offered more than one hundred different training courses in the past year. These courses included safety, JRT, JMT, JIT, industrial hygiene, reporting income tax, problems of handling employees, typing, filing, shorthand, blueprint reading, vocational psychology for conference leaders, employee counseling, methods of conference leadership, production control, packing, shipping, car bracing, property accounting, warehousing, air corps organization, inspection, and orientation. A recent pamphlet of an oil company lists more than one hundred courses available through their training department. These include such varied titles as oil chemistry, pipe fitting, metallurgy, pattern-making, job evaluation, industrial relations, and supervisor training.

The man who sets up and manages such programs must be able to prepare work sheets, visual aids, manuals, and other instructional devices. Recent industrial teaching aids are equal to the best developed by public schools and colleges. In fact, many present-day industrial training programs maintain curriculum laboratories staffed by one to a dozen persons—artists, photographers, industrial writers, and curriculum specialists. In a large plant the training director must be able to stimulate and supervise these men and to evaluate their work. In a medium-sized or small plant he must do much of it himself.

A new industrial attitude, which is characterized by an increased interest in employees as individuals, is somewhat responsible for the broadened range of training activities. This places an additional demand upon the abilities required of a training director. Relatively less emphasis is now being placed upon the motor skill and the machine to be mastered, and more upon the person doing the learning. Surveys reported by *Fortune* magazine reveal that one fifth of all factory employees are dissatisfied with their jobs and one third more are sometimes indifferent to or disinterested in their work. In the light of these facts, training directors are expected to give more attention to the employee's personal well-being, to his physical and mental health, and to all the subjective factors which might interfere with his happiness, personal growth (learning), and production.

James F. Lincoln, Cleveland manufacturer of welding equipment, expresses this view as it is understood by executives:

Great as the American industrialist is, he has failed to develop the abilities of the worker to anything like the degree he has developed pro-

duction methods with machinery. The possibilities of the individual are so much greater than the possibilities of machinery that this lack seems unbelievable.

The work in selection, clinical interviewing, and counseling of supervisors recently done by the training department of the Propeller Division of the Curtiss-Wright Corporation is further practical evidence of this new emphasis in training. Their program was developed with the help of Indiana University, Pennsylvania State College, and the New Jersey State Teachers College. The Curtiss-Wright program attempts to provide supervisors with a technique which will enable them first to analyze personality traits, and then to deal with these abstract human factors more intelligently. The program involves counseling based on interviews and the results of five tests—the *Otis*, the *Bennett Mechanical Comprehension*, the *Bernreuter*, a *Personal Audit*, and a vocational interest form. Only a training director with a good knowledge of vocational psychology is competent to equip supervisors to handle such a program.

Modern theories of industrial training advocate giving attention to the whole individual and developing individual understandings, relationships, and attitudes. These are the intangible social and psychological factors which motivate the use of the mechanical and motor skills with which training was once exclusively concerned. Building wholesome industrial attitudes of cooperation and pride in workmanship and production is a complex educational venture. If a training department is worth establishing, it is worth staffing with those who know more about the art and science of building wholesome attitudes of teamwork and cooperation than the ordinary foreman, from whom the worker would obtain casual instruction if the training department did not exist.

Duties of Training Directors

What training, experience, and personal qualifications are best for the modern training director? The best way to answer this question is to list some of the tasks he will have to perform or train others to perform. Among these tasks are the following:

1. To discover group training needs; to plan new programs and revise old programs to meet these needs.
2. To analyze jobs and operations; to make job breakdowns for teaching purposes.

3. To prepare course outlines; to write manuals, job sheets, and flyers for short specialized courses drawn from the broad fields of industrial engineering, industrial management, personnel administration, mechanical trades, office practices, semiskilled jobs, vocational psychology, and teacher training.
4. To select and train teachers in methods of instruction, conference leadership, use and development of instructional aids, selection and use of films, and classroom management.
5. To furnish and equip classrooms; to arrange vestibule and production situations for training; to keep unit costs on training; to prepare budgets.
6. To publicize, sell, and dramatize training; to stimulate use of training service by such methods as bulletin boards and news stories for the company paper; to contact operating departments, line foremen, and employees, win their confidence, and offer services useful to them; to build employee attitudes receptive to training.
7. To counsel individually with top management on problems that might be solved through training; to suggest alternative solutions and outline programs necessary to implement action; to participate in management's planning.
8. To contact state, federal, and private educational agencies, and to obtain their services when they can be useful.
9. To set up a plant library and encourage its use.
10. To supervise or edit company publications.
11. To measure and maintain employee morale through training, morale surveys, counseling, and other activities.
12. To plan for, supervise, and administer the training department, whether including two or three instructors or as many as one hundred.

This is a general statement; now for some examples. The first comes from the Kimberly-Clark Corporation, which states the duties of its training director as follows:

The Training Supervisor reports to the Manpower Director and his duties and responsibilities are as follows: (1) Administer the Training Section of the Industrial Relations Department; (2) develop and maintain training objectives, policies, programs, and procedures; (3) advise and counsel the Manpower Director on development, application, and coordination of corporation-wide training activities; (4) develop and maintain programs for beginner, junior tradesman, specialized trade, clerical, understudy progression, foreman, supervisory, and sales training; (5) work with outside vocational schools and other educational

agencies and enlist their cooperation in offering courses which meet supervisor and employee requirements; (6) make primary selection of mill training supervisors; (7) develop and improve instruction methods and techniques; (8) provide outside instructor personnel for specific training needs, and procure outside training facilities required; (9) direct emphasis on training to prepare employees for promotional opportunities, and provide coordination of this training with manpower programs; (10) provide data and assistance as required by the Assistant Director of Industrial Relations in labor negotiations; and (11) evaluate training costs and results against established objectives.

Here are the duties and qualifications for a Director of Public Employee Training, Department of Civil Service, State of New York:

Duties: Under administrative direction of the Civil Service Commission to plan, evaluate, coordinate, and direct activities relating to the training of public employees in state and local governmental units; and to do related work as required. Examples (illustrative only): assigning and directing the work of the technical and nontechnical staff of the Division of Public Employee Training; surveying and determining needs for training throughout the governmental structure of the State, including pre-service training, induction training, training for purposes of increased efficiency, promotion, and general education, and training to meet specific needs; planning courses, preparing text and examination material, supervising the conduct of classes, and otherwise administering training programs; arranging for training courses through established training agencies; conferring in a consultant and advisory capacity with existing training agencies to evaluate, integrate, and coordinate their efforts and consolidate schedules, conditions of training, instruction, supervision, and administration to insure proper standards and provide for certification of the training and those completing it; supervising the preparation and distribution of training manuals and handbooks; organizing advisory committees to investigate and report on training problems; establishing and maintaining effective liaison with representative federal and private training agencies.

To perform the duties listed in the descriptions above, the training director will have to deal with and understand the problems of the veteran, the aged, the handicapped, and the newly employed and unskilled youth of both sexes. He will be responsible for training production workers for unskilled or semiskilled operations; he will train clerical workers, secretaries, mechanics, tradesmen, group leaders, telephone operators, foremen, executives, staff specialists, salesmen, and a variety of others on all levels and in all divisions of the business.

Formal Training in Education Is the Primary Requirement.—A modern training director must have formal training in the field of education. In addition, he should have teaching experience in

classroom or shop; he should be an excellent teacher himself and be able to develop this ability in others. He should be familiar, either from his college education or from his practical experience, with several of the following fields:

<i>Most Important</i>	<i>Desirable</i>
Methods of Teaching	Educational Supervision
Educational Administration	Visual Aids
Curriculum Development	Vocational Guidance
Vocational Education	Social Psychology
Teacher Training	Industrial Psychology
	Adult Education

Psychological Training Valuable.—Many training directors have college majors or minors in educational or vocational psychology which, next to education itself, is probably the best background for training. Useful courses in psychology are those below:

<i>Most Important</i>	<i>Desirable</i>
Educational Psychology	Industrial Psychology
Psychology of Learning	Tests and Measurements
Individual Differences	Occupations and Job Analysis
Psychology of Vocational Education	Counseling
Personality Development	Industrial Sociology

Courses in personnel management are as helpful to a training director as courses in psychology. Courses in interviewing, placement, occupations, testing, personnel research, counseling, labor legislation, and industrial relations are all helpful. Industrial engineering provides an excellent background if coupled with some training or experience in education or psychology. Courses in time study, job evaluation, methods, layout, quality control, fatigue, or safety are helpful. Training in business administration and industrial organization is also useful, especially to a director who is to train foremen or executives. The fields mentioned in this paragraph are what we have termed related training. They are valuable only if the primary need for training and experience in education is met.

Work Experience.—Those who combine the formal training described above with work experience in several of the fields listed below are usually well suited to organize and administer training programs:

1. Industrial or public school teaching or administration
2. Engineering, especially industrial engineering

3. Personnel experience
4. Employment in industrial psychology
5. Public speaking, law, the ministry, or conference leadership
6. Promotion, advertising, or sales work
7. Supervision, administration, foremanship, or business management
8. Shop or office experience as a worker

Variety in work experience is highly desirable. A successful industrial personnel consultant recently said that he had held thirty-two different positions before becoming a consultant. The prospective training director who has held several different types of positions has experienced some of the rapid occupational adaptations which a training man must make in his routine work. One who has held a single position or a single kind of position too long is likely to be set and narrowed in his viewpoint. Since the training director must understand the viewpoint of his trainees, who may range from messengers and salesgirls to top executives, such narrow-mindedness is a serious defect.

Personal Characteristics of Training Directors

Probably the most important personal traits needed in a training director are social sensitivity, intelligence, and adaptability. He must readily perceive another person's needs and be willing and able to meet them to that person's satisfaction. This means that he must sense others' social and psychological needs, and their attitudes toward his efforts to meet those needs. He must not be set, satisfied, or rigid in thought. He must be able to put himself in the place of all the thousands of employees in his industry. In his response to their needs, he should be as theoretical as a social psychologist and as practical as a city editor.

If intelligence is considered as being made up of abstract, social, and mechanical traits, he should be very strong in the first two. Traditionally, we have required superior amounts of mechanical aptitude, and some of our smaller industries are still doing so. Although a high level of abstract intelligence is required, it will be a distinct handicap if its possessor has any extreme evidence of it in his speech or manner. An academic background and an intellectual approach are desirable, provided they are not offensively evident.

A third personal trait of importance is the will to serve, the desire to help. It is this trait which will stimulate a training man to dis-

cover and meet employee needs. It will help maintain his will to set up and offer appropriate training in the face of indifference, ignorance, and even obstruction.

Managements seeking good, experienced professional training men are beginning to find that they must pay a premium for them. Qualified men are scarce, mainly because the job is new and because few men have prepared themselves for it. Where training activities are confined to group training of a manual or motor nature, the salaries approximate those of engineers or technicians in the same industry or area. Where the training man is relied upon to build employee attitudes, to train top management, or to counsel management on employee problems, the highly specialized nature of the work merits much more in compensation. One of the major reasons why managements have failed with their training programs is that in the past they have been guilty of attempting to hire a professional at the pay and status of a technician.

In any analysis of factors influencing the selection of training directors, it must be admitted that prejudice has kept out of the field for a long time those very persons who could benefit it most, namely those trained for the job and in the whole learning process and its stimulation, that is, those trained in teaching. Recent factors, however, have helped to open the field to those best fitted professionally for it. These factors include the following :

1. Increased training of foremen and executives, requiring a director who can prepare programs valuable for and acceptable to highly paid specialists. All the shop experience in the world will not be of much help in teaching or developing a course in labor legislation or theories of industrial organization for junior executives.
2. Increased emphasis upon the trainee—his complete wants and needs, his abilities and attitudes—and a more reasonable emphasis upon the production job, the method, the machine, and the materials. Attention both to the individual and to his relations with others.
3. Wider variety of services offered by training departments—publications, morale surveys, orientation, public relations, etc.
4. Realization that the training director is an administrator who, like any other director, must plan, organize, and supervise his own staff.
5. Closer relationship of training with other staff and service departments and the new responsibility given to training to interpret the functions of job evaluation, safety, methods, personnel, sales,

and a host of other staff and service units to workers and supervisors.

6. Increased management attention and status given to human relations. Elevation of personnel work to a professional level comparable in responsibility, service rendered, and salary paid, to work in engineering, research, legal, or sales departments.
7. Admission of training men to the planning councils of management. In some cases this has gone beyond mere admission. Some managements rely upon the advice of their training men before making major decisions on policy.
8. Recognition of the values derived from willing and even enthusiastic employee cooperation. A feeling of assurance that the right kind of training goes far toward obtaining employee cooperation and developing a widely shared responsibility for the success of the business.

Summary

In hiring a training director, major emphasis should be placed upon his knowledge of training, learning, and teaching. Encouraged by the limited and unrealistic views of some state and university departments of vocational and industrial education, we have over-emphasized the need for trade skills and practical operating experience in the industrial educator. A practical shop or office man, who may know how to perform every operation in the department, may be completely ignorant of the learning curve, motivation and blocks to learning, preparation of teaching manuals, job sheets, and learning aids, and the measurement and development of wholesome, cooperative job attitudes. If so, he is not the man for the training director's job.

CHAPTER 6

WHAT TO TEACH

There are two popular and widely different approaches to the question: What should a training department teach? To emphasize and sharpen these differences, we shall state the two plans in their most extreme form.

Teaching Should Solve Existing Problems.—Advocates of this plan believe that the training director should enter a plant and look for problems and grievances that already exist. If he sees numerous accidents, he will recommend that safety precautions be taught. If he sees serious lack of cooperation and consequent loss of production because Department A believes that Department B is deliberately sending inferior materials to work with, he will then recommend that one department be taught to understand and appreciate the work and problems of the other department. If employees are highly dissatisfied and recalcitrant because of tactless leadership, he will recommend that supervisors be instructed in tactful management. If employees grumble about paying too much for their group life insurance when it is actually given to them without cost, he will recommend that the employees be taught the company's policy and practice in insurance. If operator learning time is too long and if valuable machinery is frequently damaged because of improper operation, he will recommend that an operator training program be instituted.

According to this extreme view, employees should be trained only in those facts, skills, and understandings where shortcomings have already caused serious and painfully obvious disturbances.

Teaching Should Prevent Future Problems.—Advocates of this plan believe that the training director should not concern himself with the pressing and immediate problems of the company. Instead, he will sit down in studious quiet and draw up a long-range plan covering a period of many years and providing that each employee will receive instruction in the skills of his job, in the facts he must know, and in the attitudes he should acquire. For example, in the first year all the supervisors will study job organization; in the second year they will study the company policies and practices; in

the third year they will take up employee psychology; not until the seventh year will they be trained in the technical and related phases of their jobs.

The blueprint will also cover the other employees. By means of orientation classes, the house organ, employee meetings, and the bulletin board they will be instructed in company history. This will be followed by an education drive in the subject of company products, then by instruction in the American system of free enterprise—why it is good and how full production will strengthen it. Employee education will thus be outlined for three to five years. There will be no need to change the plan because, in theory, it is designed to eliminate all future emergencies and disturbances.

According to this equally extreme view, a long-time, comprehensive plan should be drawn up without considering the specific needs and the on-the-spot problems of the company.

Guiding Principles of Training

Probably no educational director in industry today would fully support either plan as stated above. Both plans are too extreme. However, there has been a regrettable tendency for training directors to join one of these two groups, with the opposing sides usually approaching the extreme positions just mentioned. One group, consisting of "problem solvers," calls the other group impractical planners whose efforts would be more appropriate in a college seminar where people are paid for such utopian vision. The sponsors of the long-range plan, in retaliation, maintain that their opponents are "dike fixers," who attempt to patch holes which would not have appeared with proper planning and preparation.

The right answer to the problem, "What to teach," lies somewhere between the dike fixers and the planners. Without doubt, teaching should be directed toward the improvement of those functions that are currently weakest, but it should not become so involved in solving specific problems that long-time, preventive training is completely neglected. There should be a long-time, preventive, cumulative, training plan of over-all improvement, but this should not be carried to an extreme by refusing to attack pressing weaknesses at the opportune time.

In order to avoid either extreme, the training director should guide his planning by his answers to two questions:

1. What general principles dictate the subject matter areas which all industrial training departments should eventually cover? What

general classes of teaching material should be included in a sound, over-all, long-time, progressive training program appropriate to any industry or business?

2. How can this long-time, general plan be made to provide immediate attention to training needs unique to a local industry? What can a study of local needs and weaknesses contribute, and how can this study be made?

Since industrial education is relatively new, fast-growing, and not yet certain of the exact role it is supposed to play, we must realize that we cannot depend entirely on tradition to tell us what to teach. The field is like a one-room house which is added to over the years, one room at a time, as unexpected increases in the family occur, until it reaches a ten- or twelve-room size. The final result does not make complete structural sense. Architecturally, it is a hodgepodge. The house does keep off the rain, but it falls far short of rendering the fully effective service for which the structure is intended.

Training has grown, over the years, from the one-room stage of training in narrow manual skills to a sprawling, many-roomed establishment. But, as conceived and practiced by many of us, it is in some ways architecturally faulty. The flaws are the natural and expected ones of any fast-growing, successful, pioneering effort. In their zeal to prove that the training method is a practical answer to many production problems, training directors have appropriately placed expedient action above logic, order, and basic principles. If, in the early stages, they had taken any other course, if they had retreated into lengthy, detached conferences, insisting on clarification of every basic factor upon which problems rested before taking action, industrial training would probably not be an accepted profession today, one which is now recognized as meeting a real need in a practical, everyday world. But in our firmly established, maturing training departments of today, there is no longer any reason or excuse for adolescent thinking and action. We are now far enough advanced to follow a common aim and to be directed by a few guiding principles.

The first principle can be stated as follows: *The aim determines the subject matter which industrial training departments should eventually teach.* Any good dog trainer will agree that what he teaches a dog depends upon what he wants the dog to become. Similarly, what the training department teaches in any company should depend upon what it wants that company and the personnel of that company to become. The subjects to be taught should depend upon where the learner is before training, and where he should be after training.

Training should teach whatever skill an employee should have but does not have. Training should teach an employee those facts he should know but does not know. It should inculcate in an employee those attitudes and beliefs he should possess but does not possess. It should emphasize the differences between what a supervisor is and what he should be. It should strive to attain complete employee-employer understanding and cooperation, and attempt to eliminate the present limited understanding and lack of cooperation.

What should be taught is completely dependent upon the aim or purpose of the educational enterprise. Unless we know what we want to accomplish, efforts directed toward improvement are futile. What should American industry and business aspire to become? What should a given clerical worker, a mechanic, or vice-president become, as compared with what he is now? When we have answered these questions, then we shall be in a position to determine the content, courses, and materials instrumental to that growth.

In Chapter 2 the writers stated the aim of industrial training:

To build continuously and systematically to the maximum degree and in the proper proportion that knowledge and those skills and attitudes which contribute to the welfare of the company and the employee.

This aim grows somewhat naturally out of the general confused industrial picture today, as contrasted with those conditions which would be more nearly ideal. First of all, industry recognizes that it must solve quickly the great problem of how to gain greater employee-employer understanding and cooperation. Attitudes on both sides must be changed so that willing cooperation and a sense of trusting partnership supplant mutual distrust and suspicion. Knowledge must be developed among all employees in a great variety of fields, from general economics to an understanding of department waste figures. Skills, too, must be not only maintained at their relatively high level, but improved wherever possible. A large share of these general goals, a large responsibility for becoming more nearly this ideal self, industry has given to training departments. In effect, industry has told training: "Take your science of systematic development of behavior and change all of us into a family more fully skilled, more intelligently participating, and, especially, more wholly cooperative."

In this mandate we have a statement of our ultimate destination. We can set forth these principles as necessary to the accomplishment of this aim:

Industrial training today should include all levels of personnel in industry, from the sweeper to the president. Therefore we can be guided in determining what to teach by recognizing that long-time plans must eventually include the instruction of all levels of personnel.

An industrial training program today should provide for continuous and cumulative learning. Training is never completed. Therefore we can be guided in determining what to teach by recognizing that long-time plans should provide subject matter for continuous development of all levels of personnel.

Industrial training today should continuously educate all levels in each of three fundamentally important areas: (1) skill, (2) knowledge, and (3) attitude. Therefore we can be guided in determining what to teach by recognizing that long-time plans should contain courses and other training devices of sufficient kind and variety to educate all continuously in each of the three major areas.

Industrial training today should place first and greatest emphasis on education in the desire and ability to cooperate, in mutual understanding, and in the social skills of working harmoniously together. These are the factors which most influence the effectiveness of industry today, and the security and satisfaction of its personnel.

These principles form the foundation of industrial and business training. Long-time and specific programs developed with reference to these principles will form a training plan with purpose, continuity, completeness, and integration.

Statement of Basic Subject Matter Classifications

We present for the guidance of management and training men a sample set of subject matter classifications growing out of these aims and principles. In the long-term plan of subject matter that should be taught, as sketched below, knowledge, skill, and attitudes for all employees are included. Details are arranged on a continuum, beginning with basic common needs of all workers regardless of the industry where they are employed, and extending through the specialized needs of technical, professional, and top management employees.

A training director must determine where in this continuum he will start any learner. This will depend upon the trainee's experience, his education, and his position in the company. The distance the learner will be expected to travel along this progression will be determined by the goal the company has established for him.

EMPLOYEE LEVELS	KNOWLEDGE
Worker Level	<ol style="list-style-type: none"> 1. Facts pertinent to the job, such as breakage point of materials, machine speeds, quality standards. 2. Knowledge of company and company policy, such as wage policy, promotion policy, rules and regulations, grievance procedure, union contract, company organization. 3. Knowledge less directly related to the job and company, such as consumer education, basic economics, social security program, music, child care.
Working Supervisor Level	<ol style="list-style-type: none"> 1. Technical knowledge, such as mathematics, electricity, cost accounting, textiles, rubber, insurance. 2. Knowledge of relationship and responsibility to lower employees, to superiors, and to company.
Supervisory and Administrative Level	<ol style="list-style-type: none"> 1. Knowledge of latest developments in technical phases of the job, such as new developments in assembly-line technique, experiments being carried on with new office or shop methods and systems. 2. General and technical knowledge, such as national business conditions, competition, new labor legislation. 3. Advanced knowledge of "man-management," such as fundamentals of industrial psychology, trends in the labor movement, basis of successful leadership. 4. Broad knowledge of company and company policies, full knowledge of company's financial position, expansion plans.
Executive Level	<ol style="list-style-type: none"> 1. Knowledge of what employees and supervisors are thinking, how this should bear on policy and procedure. 2. Principles of leadership; historical background of industrial relations, labor-management trends and probable outcomes; advanced approaches and experiments in scientific management of men, materials, money, and machinery. 3. Knowledge of special interest to top management, such as advanced principles of industrial organization, taxation, world trade.

EMPLOYEE LEVELS

SKILLS

Worker Level	<ol style="list-style-type: none">1. Technical and manual skills, such as operating a loom, typing, or sweeping.2. Skills of human relationships, such as cooperation, courtesy, or skill in presenting a suggestion or complaint.
Working Supervisor Level	<ol style="list-style-type: none">1. Technical job skills, such as ability to follow work schedule, diagnose machine malfunctions, or edit and improve rough copy.2. Skill in applying clearly stated management policy; how to make specific decisions on the basis of general company policy.3. Fundamental man-management skills, such as ability to give orders properly, discipline, handle complaints.4. Skill in training employees in their specific jobs, department rules and regulations.
Supervisory or Administrative Level	<ol style="list-style-type: none">1. Skill in man-management, such as ability to inspire and secure cooperation.2. Skill in organization and management, such as ability to plan jobs, delegate, control, evaluate.3. Skill in training subordinates toward higher positions.4. Skill in interpreting and applying management policy.5. Skill in cooperative development of policy, such as standard practice in reporting absences, by conferring with other supervisors.
Executive Level	<ol style="list-style-type: none">1. Developing critical, technical, and professional skills, such as engineering, finance, public relations.2. Skill in analyzing, developing, and disseminating policy on human engineering, job organization, costs, and management problems—how to make a sound policy and put it into effect.

EMPLOYEE LEVELS	ATTITUDES
Worker Level	<ol style="list-style-type: none"> 1. Feeling of self-satisfaction, security, belonging, and individual importance. 2. Interest in the job, in better performance, and self-advancement. 3. Proper attitudes toward other employees and their rights and privileges. 4. Feeling of responsibility to the company. 5. Feeling of personal responsibility for waste, cost, welfare of company. 6. Appreciation of company policy and procedures, as enforced by superiors.
Working Supervisor Level	<ol style="list-style-type: none"> 1. Feeling of security, of being needed, of belonging to management. 2. Planning for and development of desirable attitudes and appreciation among employees.
Supervisory or Administrative Level	<ol style="list-style-type: none"> 1. Appreciation of what company wants and what employee wants, desire to mediate these wants. 2. Feeling of participation in management. 3. Appreciation of rights and privileges of all subordinates. 4. Appreciation of democratic procedure in industrial management; the value and necessity of encouraging individual initiative. 5. Study of factors bearing on attitudes and appreciations of employees and supervisors. 6. Concept of industry as a social organization.
Executive Level	<ol style="list-style-type: none"> 1. Planning for and developing desirable attitudes and appreciations among supervisors. 2. Interest in and responsibility for community growth and development. 3. Interest in preservation of this economic order through providing increased benefits to both labor and management.

Value and Use of Long-Term Program

Classification of the personnel of industry into workers, working supervisors, supervisors and administrators, and executives, and the classification of training objectives into skills, facts, and attitudes, is somewhat artificial. The learning of a skill often cannot be separated from the learning of certain factual knowledge which must accompany

it. Knowledge, in turn, is generally inseparable from attitude; the teacher does not always try to develop knowledge at one time and attitude at another time. In fact, attitude may be developed most effectively at the same time that a skill or a fact is being taught. Similarly, the demarcation between the various personnel levels is not actually as distinct as the categorical groupings would imply. However, the classifications are believed to be, for all practical purposes, sound and serviceable.

The subject matter objectives categorized above constitute, in a sense, the basis for a general, long-term plan of industrial or business training. In the development of a meaningful, appropriate, and timely program, the training director must adapt and modify this long-term plan to satisfy the special emphasis or sequence required by the conditions in his own company. There must be a balance between providing for universally needed training, as outlined in the foregoing plan, and providing for specific needs that sometimes develop almost overnight.

How to Determine Specific Needs

Once top management has studied and approved these long-term goals, the training director is in a position to investigate specific, immediate needs. With both requirements in mind he is ready to plan a program which, while solving current problems satisfactorily, will also gradually but continuously lead his personnel through the full range of development of which they are capable and for which they have need.

The starting point for the application of a general plan of training, such as the one just described, also must be determined by a study of each organization. The problems immediately urgent obviously must be dealt with first, though in such a manner that they form a basis for later growth. Subsequent stages of the program should gradually include training material and training courses and devices aimed not only at the solution of urgent immediate problems but also at the prevention of problems.

In most companies the pressing problems are not hard to find. Some of them may be new, such as the interpretation of a recently written labor contract. Frequently they include old and stubborn problems, such as waste, cost, breakage, or lack of employee sympathy with a change in company rules and policies. These problems present a real challenge to training departments but they also offer an opportunity for training to prove itself an effective problem solver.

Specific need for training can be determined by two methods. The first involves contacts and conferences with those who may know of training needs; the second and possibly more objective method involves a study of performance records.

Contacts, Consultations, and Conferences.—Some training directors in determining what specific subject to teach use steering committees. Their assumption is that the representatives of management, being close to the problems of production and cooperation, will be among the first to recognize the need for immediate problem-solving courses. These committees usually include the production superintendent, the personnel manager, some supervisors, an industrial engineer, one or two members of top management in the vice-president class, and various department heads.

Besides relying upon formal committees to recommend immediate training needs, the training supervisor must deliberately contact a host of individuals who, through their work in various fields, experience failures, conflicts, and slow-downs that can be eliminated by training. The company nurse, the employee counselor, employee representatives, first-line supervisors, staff technicians, and employees who are well liked by their fellows are good sources of suggestions. They prevent the director from falling into the error of providing only the types of training regarded as most necessary by top and middle management. While these wishes should receive primary consideration, they can be supplemented profitably by recommendations from others who are closer to the levels at which training must be applied, and in which the need for it first becomes evident.

Analysis of Performance Records to Determine Specific Needs.—The training director who undertakes to adapt a long-term training plan to the immediate, specific needs of his company may proceed as does the physician who examines an ailing patient. The doctor investigates the medical history of the patient, checks his pulse and his temperature, makes several controlled laboratory tests, and finally, after combining and interpreting the resultant data, diagnoses the ailment and prescribes treatment.

The training director also makes use of the history of his patient, in this case the company. What has been the production record, the unit cost picture, or the history of labor turnover, organization changes, or labor-management relations? From his experience with his own company and the industry of which it is a part, the director arrives at certain standards of normal performance. He checks for deviations from these standards. Is cost variance excessive? Are

waste, breakage, and rejections excessive? Is there an undue amount of overtime or downtime? Are quality standards consistently met? What clues lie in the records of absenteeism, accidents, grievances, exit interviews?

The training director may, for example, focus his examination on labor turnover records. Probably no one other factor points as clearly toward problems to be solved by training. Under normal business conditions, labor turnover is a remarkably reliable index; it measures morale, the quality of leadership among supervisors, the working conditions, the fairness and the degree of appreciation of company policies, the quality of job instruction, and the wage schedule. Once his work is under way, the experienced training director will carefully scan weekly or monthly turnover figures, and trace any undue fluctuations to a cause that instruction can remedy. For labor turnover is not only a prime indicator of what to teach, it is one of the objective measures of training success.

Once the training director, like the medical man, has the full inside story of his patient, he can see in certain facts an indication of the existence or imminence of a specific organizational ailment. He must then prescribe the type of training designed to cure this specific ill. It may well be that the solution of the problem lies in something he had previously outlined in his general over-all objectives. If so, he is both solving an immediate problem and contributing to his long-time development objectives.

Summary

Two extreme and opposing views may be taken in deciding what to teach. According to one view, industrial training departments should instruct only in those facts, skills, and understandings where shortcomings have already caused serious and painfully obvious disturbances. According to the other view, instruction should be given according to a long-term, logical curriculum based upon employee needs common to all industries, without attention to the immediate and urgent problems of the local industry. Neither view is realistic; a sound approach to the problem of what to teach includes the desirable features of both. There should assuredly be a long-term plan of over-all training, preventive and developmental in nature, but this plan should begin, in so far as it can, with those problems which are most urgent to the local industry. Instruction should come first in those fields where the greatest local problems are found to lie.

The long-term plan must grow out of sound principles regarding the purpose, scope, and responsibilities of industrial and business training. This, in turn, must grow out of the condition of American industry today, as contrasted with what industry must become. American industry must have more intelligent participation on the part of all employees, personnel must become more highly skilled, and most important, all must become more effectively cooperative. Therefore, the selection of subject matter should follow these principles: (1) All should be trained—lower-line employees, upper-line employees, middle management and upper management; (2) All should learn continuously—learning should never cease; (3) All should learn continuously a variety of knowledge, skill, and attitude; and (4) Of these subject matter areas, instruction in attitude, the social skills, the cooperative skills, and mutual understanding is most important today. These principles are foundational, and subject matter natural to these principles will suggest itself.

CHAPTER 7

INSTALLING A TRAINING PROGRAM AND BEGINNING TRAINING ACTIVITIES

Preliminary Work Before Training Department Is Established

Preparatory groundwork must be done by top management prior to the formal establishment of a training department. Lack of this preparation can lead to complete or partial failure of the department, even though its organization is good, its objectives are sound, and its staff is highly capable. On the other hand, thorough preparation can build up momentum strong enough to carry a training staff of medium ability through the difficult beginning period.

To substantiate the first of these statements, let us consider an actual example. A training director of proved ability and great experience was brought in to head a newly formed training department. Men who knew him and his record naturally assumed that he would be an immediate success in his new job. But because top management had not taken the proper steps to prepare for his coming, these difficulties arose.

First, supervisors did not recognize him as a part of the real management of their company. They looked upon his work as a luxury unrelated to actual productive work in the plant. As a result, they felt no responsibility for the success of the classes they attended, nor did they feel any obligations to explain and defend the educational program to workers under their supervision. Second, the bracket of management next above supervisors did not understand the staff and service nature of the training department. They felt that the training director was meddling in their business. They also were alarmed by the analysis of their work that was made in order to determine training requirements, since it seemed to threaten their reputation and security. In self-defense they tolerated and sometimes even initiated smears of the training director and his work. Third, the personnel director himself also was alarmed. He had not been consulted on the establishment of a training department, nor had he been told how the training director would function under his authority. He therefore saw the new man as a rival for his position rather

than as an aide who would improve his own effectiveness, security, and status in the organization. He did not defend his training director before others. Seeking to save his own skin, he allowed the new man to make unnecessary mistakes, took care not to defend him from criticisms, and did little to assist him.

To illustrate what should have been done in this case and to show how the mistakes and difficulties could have been avoided by proper action on the part of top management, here is another example of what happened some years ago when an old established company installed a training department.

Upon his arrival, the new training director found that the subject of his coming had been discussed in at least four regular management meetings over a period of several months. The head of the company himself had taken the responsibility of selling management on the importance of the training department that was to be established. He gave specific instances of problems which could be reduced or solved through the use of training methods. He explained the staff and service nature of the new department, giving as an example the difference in purpose between an auditor studying the company books from the standpoint of administration and authority, and a training director studying the same books with a view to service through training others in how to keep them more accurately. In short, he put the whole matter before his key men in such a way that long before the training director arrived, they felt favorably inclined toward the new department and assumed a responsibility for its success. What is more, they had a real desire to use the service which a training department could offer.

The personnel director had had no previous experience with and little knowledge of training departments. The company head therefore spent some time with him, making plans for the coming of the new man and showing him how his own work would be made easier, how the services of his department would be broadened, and how his own position would be strengthened. The personnel director in turn explained the new service to those in his own department.

In this particular case, the company president and the personnel director told the key men and the supervisors something of the personality and background of the new man they were to meet. They emphasized his practical work experience and revealed that he had come up through the school of hard knocks. They did this because they knew that most of the supervisors and some of higher management were lacking in formal education, and they wanted to forestall any resentment or suspicion of the schooling and degrees that were a

part of the training director's background. The men were also reminded that the new man was leaving his friends and coming to a strange town, and that he would naturally be eager to receive a personal welcome and acceptance in the plant, and to make friends in the community.

As a result of all this groundwork, the training director was able to get a permanent program under way at least six months ahead of the schedule he had set for himself. Instead of having to spend most of his time the first year in selling himself and his program, in removing blocks created by misunderstanding and unwarranted fear and suspicion, he actually found himself being pushed into various types of training programs before he was fully prepared to present them. He found men taking the initiative in making friends with him, the very men who, if they had not been led to cooperate, could have blocked effectively for years the progress of his department.

If training directors and training departments were as well understood among managements, as well defined and as traditional as cost or quality departments, much of this preparatory work probably would not be necessary. But training men and training departments of the kind spoken about in this book are relatively so new and undefined, or so poorly and sometimes inaccurately defined, that misinterpretation is easy. When this new child comes into the business family unannounced and unblessed, there is bound to be resistance from established department heads, who are jealous of their own authority, experience, and specialization.

Management must prepare the plant for the installation of a training department, long before personnel arrive to take over the job.

Steps to Be Taken by the Training Department Before Beginning Scheduled Training

Once the training department is formally established, there are several important steps which should be taken by the training staff itself before beginning routine conference and classwork. First and most important of these steps is the development of close personal acquaintance and friendly relationships with as many members of management and as many of the employees as possible. Rational or not, it is an established fact of practical leadership that in listening to a man or in judging him, people usually will allow themselves to be affected as much by their subjective reaction to him as a person as by the logic of his spoken thoughts. To increase the probability that

trainees will accept his ideas and counsel, the training director should strive to become known and liked in the plant.

Even after management has made a full effort to get understanding and acceptance of the program and the person, the training director still must sell himself. If he does not, he is very likely to fail, even though he may have the answers to problems which will cut burdens in half and double production. The training director who allows his program to fail, because of irrational and personal blocks and hindrances, has not learned the most primary and fundamental principle of all social relations, which is that people must like a person or an organization before they pay much attention to it, and especially before they willingly allow themselves to be changed by it. *The new training director should become known and get accepted personally.*

Another step that the training department staff must take soon after the establishment of the department is to become thoroughly acquainted with all phases of the business. This can be combined easily and naturally with the step of becoming personally acquainted. In many instances the training director tells supervision and management that before he can teach he must be trained himself in what their business is about, and that he must depend upon them for that instruction. Thus their first real contact with him is one in which they have the role of teacher, and the training director that of learner. In a few months he will have spent some time with each key man and he will know some employees in each department and division. At the end of his learning period, he may know more about the business as a whole than most other members of management. In addition, he will have accomplished his objective of becoming acquainted with the personnel and making himself known to them and accepted by them.

Some training men think that a period as long as a year should be spent in just learning the business. They think that if they start very much training before the study period is over it will be "canned." In other words, though training may deal with basic principles common to all industries, these principles will not be related to the problems of the particular business, since the training instructors themselves will be unacquainted with the details of company operations. The more training departments are used as direct and effective tools of management, the more the training department must know the details of what has gone on in the past; it must even be acquainted with the motives and goals of higher management, in order to lead workers to understand such motives and to guide them toward these goals.

Perhaps our best rule is to say that the training director should continue his orientation until he has the "feel" of the process, practices, and individuals of the organization. He must know both the formal and informal organization structure. This may take three months or a year, or it may take longer. But formal training should not begin until this step is past.

The training director must study the industry, both its formal and its informal structure.

How to Begin Actual Training Activities

We have shown how to get a training department or program into a plant, and how to acquaint executives, department heads, and administrators with the services this department can perform. We now are ready to discuss the devices used to get actual training classes under way: devices that help introduce training to those who are to be trained, catch the employee's fancy at the outset, and encourage him to participate fully and to profit fully. For unless the employee is ready for teaching, unless he accepts it freely, results will be forced, temporary, and possibly productive of antagonism and ill will.

Need to Promote Training.—One of the questions most frequently asked at personnel and training directors' conferences is: "How can we get trainees to want training, or even to accept it when it is offered?" The best answer might appear to be that training should sell itself. On this basis, observable training results—fewer accidents, grievances, absences, quits, rejects, broken tools; shortened learning times; increased earnings; pleasanter working relations; and self-improvement—all should make attendance at training classes something that trainees will welcome as an opportunity. Training men must bend all efforts to make their work so helpful in producing better products more efficiently, and with more satisfaction to all concerned, that extensive training will be demanded by those at all levels of the business. But an effective program will not of itself suffice.

Unfortunately, the best services do not gain automatic and painless acceptance. Even our best manufactured goods and services require expert salesmen backed by sales research, advertising, forecasting, and heavy budgets. People do not always recognize what is good for them, and those who do seldom get around to doing anything about it, especially when doing so demands continued mental effort. The training director and his staff therefore must provide incentives. In

everyday business terms, they not only must produce good instruction, but must be able to sell it as well.

The prime method of selling, as we have said, is to produce such an effective program that employees will participate in it fully and freely, and such programs should be our goal. But man's inertia is so great and the need for training is so urgent that we cannot leave acceptance of training entirely to our employees. We must encourage participation in every way possible. Further, we must not be surprised or resentful if our classrooms are not jammed just because we give useful courses or do competent teaching. One of our most difficult jobs as training men is to kindle an enthusiasm for learning, an enthusiasm which may have died or may never have existed. Industrial employees are not traditionally "school-minded." Many of them left school with unpleasant memories; and some of them had so little success there that they lack all desire to try again.

In the past we have tried to dodge this obstacle by kidding trainees into believing that they were not attending schools or classes. We have used farfetched terminology to hide all trace of formal education. This approach, however, is neither dignified, honest, nor even successful. As training specialists, we may as well admit that we are teaching, that we are stimulating learning. And we should do it so effectively that there will be trainee interest and satisfaction, as well as full returns to our companies.

Regardless of how well training is done, it will need promotion, publicity, and selling.

Importance of Strong Beginning for Any Training Class.—Many professional teachers double their regular preparation time in their first few sessions with any new class. This is because trainees are very critical during early stages of their work. They have not yet "bought"; they still have to be convinced. Until the teacher can strike some spark that will win them over, this challenging attitude prevails or gives way to an indifferent one. Under such conditions the most profitable learning cannot take place. Most expert teachers therefore run their best race in the early stages; by so doing they get free, full acceptance at the outset. They soon have most of the trainees running along the same course with them or, on rare and happy occasions, running ahead of them. The rule is that the teacher should give his best at the outset; he should eliminate at once any skepticism about the value of the course.

In opening the first class, or any class for that matter, the teacher must organize a parade, a parade of self-realization. A few serious souls join at the beginning, but skeptics line the march, waiting to be

convinced; the more resistant block the advance. Then is the time to call upon magic, showmanship, and color, for *all* must become enthusiastic marchers. And the quicker the better. Only when rapport is established and confidence expressed can a teacher proceed effectively to teaching.

The beginning is the time for the best bait and the strongest lure. They should be used—and without shame. Truly great teachers have no fear of showmanship. The story is told of President Conant of Harvard University, who, as a professor of chemistry, proved to his class how quickly two liquids would heat when mixed, by pouring the two liquids together and dropping an uncooked egg into a glass containing the mixture. He fished it out at once and threw it over the heads of his class to the back wall where it thudded dully, boiled hard. Whom shall we in industry follow? A few great teachers and our common sense, or academic pedants who decry popularization?

To begin classes most effectively a teacher should make a strong, dramatic opening.

Planning the Details.—Recently there was held a widely publicized meeting of a nationally known lecturer. At the proper signal a film was to be shown, an important film, vital to the meeting. The picture flashed on, ran a few frames, and blurred out. The house lights came on, then went out, and the projector started again, ran a few seconds longer, then stopped. This continued for about five minutes, with growing sarcasm and disgust in the comments of the audience.

Any training man who has to take time out to hunt an eraser, hang a chart, or arrange a work place, while his trainees wait, is guilty of strangling his own program. There are far too many violations of this simple rule among training men.

Good teachers get ready. They get everything ready.

Securing Participation in Planning.—Planning committees are fairly common in industrial training. Where no permanent committees exist, most training men call special committees or groups to help plan any contemplated course. The service rendered by these planners varies from mere review of plans prepared by the training department, followed by a few suggestions for improvement, to almost complete authority for formulating the program. In the latter case the committees and their chairmen rely upon the training director for advice and suggestions of a technical and educational nature. Committees accomplish two purposes: they help to prepare a course which

will be of actual use, and they help to explain the course to others who participate in the planning and to those with whom the planners will come in contact. Committees are excellent sales devices. Men do not fear or resent what they have helped to build. Instead, they usually support and defend it; at least they understand it, and understanding is basic to loyal support.

Too often, however, planning committees include only those who will have the most constructive ideas on the need for and the content of the course to be prepared. Committees should also include a few good promoters—men in key positions, influential men with wide followings, who can and will explain the program to their associates. In plants that are unionized, committees also should include a union steward or a few influential union members.

For the best results a committee should include representatives from all the levels on which training is to be done, as well as representatives from the one or two levels indicated above. If the subject is in any way specialized, a representative of the special area should be included. A committee to plan a course in feminine hygiene, let us say, might include one or two office clerks or secretaries, one or two female production or factory workers, a union steward, an office department or unit head, an assistant foreman, a nurse, doctor, or safety director, and one or two representatives of training. The bigger the committee, the better the public relations value. Of course, available time puts limits on size, five to eleven persons being most common.

The training director should not try to create or sell his product alone.¹ He should allow committees to help.

Announcing New Classes and Inviting Attendance.—Many company papers carry announcements of forthcoming classes. They tell what is to be taught, who is to teach it, what can be expected from the course, and who is invited to attend.

Some time ago the Camden plant of RCA displayed colorful posters about two feet wide by five feet long. These flyers described the year's training program, encouraged participation, and told how to enroll.

Probably the best system of announcement consists of individual notices to those for whom the course is primarily designed, plus some

¹ It must be remembered, as was said at the outset, that good training is the first requirement in getting acceptance. The sales devices recommended here are intended for use only after the product itself nears perfection. The best sales device for training is a good product, but even then promotional devices are helpful in seeing that employees get the most out of training.

company-wide publicity. The opening of specialized courses, such as those for quality control clerks or medical secretaries, requires publicity. When any group of employees sees another group interested in self-improvement, they begin to wonder and have doubts about themselves. Unguided, this anxiety can lead to jealousy and resentment. But a good training man capitalizes upon it and, if helped by effective publicity, he will soon have another group ready for training. Publicity gives status and prestige to training; it can help provide recognition for trainees' efforts.

If invitations are used, they should be sent through organizational channels so that the trainee receives his notice from his immediate superior. Sometimes the training department prepares the invitation, signs it, and sends it to the immediate supervisor to be passed on; sometimes the training department prepares the invitation for the signature of the department head. Personal invitations add greatly to the respect which trainees give to a course.

Too many trainees are given a short, abrupt notice of their invitation to classes. The best results come when a written invitation is sent seven to ten days in advance, and when a phone call is made to the trainee's supervisor or to the trainee himself about two days before classes begin. This double notice seems very necessary in a plant of any size. If the trainee is given ample time to plan his affairs, to inquire about the course, and to talk with fellow-trainees, he comes much more willingly; and the teacher's time-consuming efforts to get the trainees ready for learning can be eased and shortened thereby.

Original teachers will, at various times, be dignified, witty, formal, or persuasive in announcing training.

Tone and Attitude of First Sessions.—The tone of the first sessions should be friendly but businesslike. Classes should start promptly. Everything should be in readiness; trainees should see evidences that they are expected and that careful preparations have been made for them. If such is the case they will not treat their work lightly; and from the outset learning will be looked upon as serious work, made pleasant by good teaching.

The tone should be respectful. If the instructor belittles his efforts or his job in the slightest degree, he loses respect and confidence. In some cases, trainees' lack of respect for training reflects shortcomings that they have found in their instructors. Many training men who started with enthusiasm, sound purpose, and professional skills have become discouraged by the barriers they must overcome and the slowness of their progress. Such men need to resell them-

selves on the need for their services and the value of their work. They must, in addition, ask whether they are true teachers, who realize that individuals are slow to make changes. Only the true teacher recognizes that education is a continuous job, one which is never completed and is never free from misunderstanding, resistance, or barriers to be overcome, and which always calls for new enthusiasm, new zeal, fresh vision.

All of us get discouraged at times, but for those who are discouraged at the outset, training offers no chance for success. Discouragement is contagious, and trainees cannot become enthusiastic where their leaders let it be known that they are themselves despondent.

In the early sessions it should be made clear that the emphasis is to be placed upon persons as individuals, and upon their growth and development. Everyone is interested in those who are interested in him. We should teach skills, attitudes, and understandings, yes—but to individuals, for their use and betterment, without getting lost in the teaching content.

For a stimulating beginning the teacher's attitude should be enthusiastic, constructive, and personal.

Evidences of Support by Top Management.—The need for understanding and support by top management has already been discussed in this chapter. Equally important is the public demonstration of this support. Probably the easiest method is to make sure that a vice-president, a department head, or a works manager opens or concludes each training course. It helps to have graduation certificates signed by such a person.

Training records should be kept so that promotions can be based in part upon them. Where supervisors announce such advancements, it helps if they emphasize the candidate's performance or attendance in training classes.

Another evidence of the value top management places on training is the desire of executives themselves to be trained. This means actual training on top administrative matters, not merely a preview of what is given lower down in the organization. A training director who seeks to obtain and, at the same time, to display the fullest support of his management will make efforts to develop some sort of formal training for them, however brief; and he will make sure that top management attends.

A further strong evidence that management can give of its support for training is to open its planning councils to the training director.

Only when he is fortified with knowledge of the latest plans and programs of the company can the training director effectively prepare people for them. When it becomes evident in a business that management considers him important enough to participate in planning, trainees can more readily believe in the importance of training for themselves. In short, the respect accorded training by trainees is influenced by the respect accorded it by management.

Other evidences of support are the furnishings, equipment, and salaries provided in training. The best way a training man can improve these conditions is to make the most of what is available while striving to deserve something better. There are no quarters so poor that housecleaning, paint, and good arrangement of equipment will not improve them. And anything done to improve poor quarters is certain to bring notice and recognition. Physical surroundings are powerful influences upon trainee attitudes. They may be as influential as good teaching. Certainly the quarters must be light, roomy, well ventilated, spotlessly clean, and scrupulously arranged for neatness, balance, and trainee comfort.

To start training most effectively a teacher should arrange conditions so that there is constant evidence of management support.

Obtaining Status.—People in any social situation tend to attach themselves to, be influenced by, and defend those persons, groups, or activities that command a position of respect, authority, or prestige. The training director must work constantly to obtain status for his program. There are physical manifestations of this, such as comfortable training quarters or adequate funds for necessary training aids; there are intangible evidences, such as the accessibility of the president to the training director, the respect accorded training by production workers and office heads, and the willingness of management to free employees from work to attend training on company time. Both management and the training director must see that the status of training is high, for people will be influenced by whatever has “standing.” The responsibility of the training director is two-fold. He must obtain this status for himself and his program, and he must occasionally arrange for evidences of it to be seen.

It pays to review the opening session to see that some evidence of status has been played up.

Previews.—Many practical realists in class will be impatient to know the full plans. They will want to know the ground that the training director plans to cover, the units or steps by which class progress will be made, and something of the methods to be used.

Most training directors distribute a full course outline at the first session and explain all details fully. An example used to introduce a course in conference leadership is presented in Form 3.

OUTLINE FOR
CONFERENCE LEADERSHIP TRAINING

The Conference Leadership Training Program has been designed to give supervisory and staff personnel the knowledge necessary for conducting conferences and meetings with production employees and other supervisors. The purposes and types of conferences will be discussed as well as the techniques of conducting interesting and meaningful sessions. Emphasis will be placed on getting participation from the group and upon collection and use of facts in arriving at conclusions.

A large part of the program will be devoted to practice sessions in which the supervisors will actually conduct conferences.

<i>Date</i>	<i>Subject</i>	<i>Leader</i>
October 28	Purpose and Definition of Conferences	W. V. Machaver
November 4	Steps in Developing a Conference	J. S. Johnston
November 11	Practice Session, Led by Conferees	J. S. Johnston
November 18	Basic Types of Conferences and Getting Free Participation	W. V. Machaver
November 25	Practice Session, Led by Conferees	W. V. Machaver
December 2	Planning and Preparing a Conference	J. S. Johnston
December 9	Techniques in Controlling and Guiding a Conference	W. V. Machaver
December 16	Techniques in Controlling and Guiding a Conference	W. V. Machaver
December 23, 30	Practice Sessions, Led by Conferees	J. S. Johnston
January 6, 13, 20, 27	Practice Sessions, Led by Conferees	J. S. Johnston

Remember the time and place, Tuesday 10:30 to 12
in the large conference room at the
Personnel Department.

Form 3. Outline for Conference Leader Training

In some cases there is a first-session discussion of aims and objectives of the course. Trainees discuss what they expect to get out of the training. At one opening there was hung a colored wall chart about seven feet tall by three feet wide, artistically proclaiming the objectives of a beginning class in supervision. The instructor said nothing about the chart, but it was studied carefully by the trainees and discussed by them during the intermission.

People are usually more willing to embark on a journey if they know where they are going and why. *Sensible training men do not keep their traveling companions in the dark.*

Reception of Trainees.—If trainees are unacquainted with the location, a sign or two should be posted directing visitors to the classroom. If the teacher must be in and out, he should assign a secretary or an assistant to guide and welcome the new trainees. Place cards should be used by all means, carefully made out to include name, title, and department.

The image shows a rectangular place card with a double-line border. At the top, the words "TRAINING DEPARTMENT" are printed in a bold, sans-serif font. On either side of this text is a stylized, cursive logo that resembles the letters "J" and "J" joined together. Below the department name, the name "Mary Bush" is written in a large, bold, cursive font. Underneath the name, the words "Unit Supervisor" are written in a bold, sans-serif font. Below that, the words "Mail Room" are written in a bold, sans-serif font. The card is designed to be placed in a slot in a wooden block.

Form 4. Place Card

Place cards help to create a feeling of welcome, of being expected and prepared for. In addition, they help trainees to get acquainted quickly. The sample place card, which is illustrated above, is set in a small wooden block, slotted to hold the card erect.

Trainees will promote and use the services of any group to which they feel they belong. This feeling can be promoted most advantageously in a carefully handled welcome and reception of trainees.

Participation and Activity.—Beginning classes should move quickly into projects or discussions where the learners contribute ideas, or participate in motor activities. Any first class of adults which runs for an hour without calling upon learners for contributions, discussion, or questions, may dull and stifle them at the outset. Wearisome and long-drawn-out listening does not often promote learner activity or learning.

Learning is an active process.

Where to Begin Training

There is probably no single best place to start training. Let it begin wherever (1) there is need of it, (2) there is recognition of that need, (3) there is enthusiasm among those who need the train-

ing, and (4) there is an available program ready to meet that need. There is, however, questionable merit in the almost universal insistence among the American training directors and American supervisors that training must always begin at the top. Training directors are, of course, influenced in this insistence by line supervisors, many of whom insist that training must start at the top.

There is a psychological resistance in many supervisors toward improving their own habits first. They think that the improved pattern should be set by their superiors. Given the opportunity to learn to perform more scientifically and more profitably at their own desks and stations, they squirm out of the responsibility by asking why it is that someone else, especially someone above them, is not given the training first. There probably has never been a group of supervisors at any level which did not contain some who vigorously insist that they cannot improve their performance until those above them are better trained. Group leaders blame their mistakes on the assistant foremen; the assistant foremen pass the buck to the foremen; foremen say the superintendents need training; the superintendents say, "If we could only convince the works manager of this"; the works manager blames the vice-presidents; the vice-presidents blame the board of directors; and the members of the board are convinced that the national government is at fault. Unless training starts at the very top, it will always encounter this problem of somebody in higher authority who really needs education more. It is something of an escape device and, unfortunately, many training directors have themselves been deceived by it.

Those supervisors and training directors who insist that training must always start at the top are expecting gifts from the gods—golden words of wisdom from those in higher positions, which will make their jobs easier, if not automatic. As long as we wait until things are perfect above us before we start improving our own performance, we are actually putting off the day of our own improvement, the time when we ourselves can become better; and there is no one among us who is perfect. Foremen who blame their troubles on superintendents are truly amazed when they are told that assistant foremen look upon them as the cause of the most trouble. All of us, at all levels, need training. One line of an old hymn, "Brighten the corner where you are," is as good a guide for the place to begin training as any.

Twice in recent years the writers have seen supervisor training started with group leaders at the very bottom level in industry. Shortly thereafter, training was extended to assistant foremen. In

one case, before the company was ready to go further, the foremen themselves signed and presented a written grievance asking, "Why aren't we given these same training advantages?" Training can grow from the bottom up almost as effectively as it can from the top down. It is a pleasure to train the young and eager men who are now on the lower level of supervision. They often have more formal education than the old-timers. They have few set patterns to change, and they have future advancement to anticipate. Low-level supervisors who understand the principles of supervision and management make great salesmen of training and great promoters in their departments; and since they are more numerous than department heads and superintendents, a bigger army is enlisted in the cause if training starts at the bottom.

Another major reason for starting supervisor training at the bottom is that principles and techniques of supervision must be sold on their merit. The trainees must be convinced that what is taught is practical and beneficial. There is no authority behind teaching. When training begins at the top and comes down the ladder, improvement sometimes comes not by conviction and understanding, but by dictation and fiat. The principles taught are sometimes accepted without analysis as the voice of authority. Under such conditions principles may not be understood, accepted fully, or followed enthusiastically. By beginning at the bottom, however, enthusiasm is engendered; the teachings are tried out and, if found valuable, they are accepted and put into practice. Lower levels of supervision can more easily be led to try to improve their own performance, and they will occasionally instruct their superiors. This is, in a sense, asking lower level supervisors to help train those above them. Except for the fear with which it has been looked upon, there is nothing wrong with this approach and much to commend it.

There is no one best place to begin training.

Summary

There is certain groundwork which must be done by top management prior to the formal establishment of a training department. All management personnel should be shown how the new department can help them in their work. Explanation of the staff and service nature of the training department should be made to promote cooperation and to prevent hindrances and misunderstandings from arising. The training department personnel should make every effort to sell themselves as persons to management and employees before beginning

formal training. They should also make an intensive preliminary study of the industry in all its phases.

Regardless of the quality of training, it must initially be sold. Deliberate, planned activities, such as those mentioned in this chapter, must be undertaken before we can expect a full enthusiastic acceptance of training. The training director who feels that his single duty is to prepare an excellent program may face difficulty. In industry he must persuade people to participate in that program. Managements who are thinking of installing a training program would do well to look at their prospective training director in the light of both his ability to prepare a training program and his willingness and ability to lead employees to participate in that program.

CHAPTER 8

MECHANICS OF THE TRAINING PROGRAM

Much has been made of the battle that was lost for the lack of a horseshoe nail. We are nurtured on proverbs expounding the importance of the penny saved, the stitch in time, the oak-begetting acorn. Less publicized but nonetheless significant are the drop of oil in the machine bearing, the comma in a business contract, or the decimal point in a cost estimate. All are tremendous trifles, details that far exceed their apparent significance.

Industrial and business training, in so far as concerned with classroom instruction, have their own important details which can make or mar a program. In the planning and maintenance of an efficient training program, it is of paramount importance, as previous chapters have indicated, that the purpose and direction of the program be clearly established. Next come the major jobs of setting up an adequate instructional force, developing course content and teaching materials, and adapting, revising, and evaluating both plans and methods of training. But in addition to these jobs the training director must concern himself with the innumerable small problems that are related to and that greatly influence the accomplishment of fundamental aims.

Scheduling, hours, equipment, maintenance of records, housing of classes, the method of payment for time spent in training—all these are factors that directly affect the success of any training program. Lack of attention to these details can result in serious harm to an otherwise excellently conceived program. We shall now examine some of the problems in the mechanics of the training program that are most important in their influence upon training results.

Where Should Training Classes Be Held?

One question the training director must answer is whether training should be done within company walls or outside them. Some companies make it a point to hold their supervisory or sales training conferences at a location off the company premises; they may house the conferees at a hotel or resort for the duration of the training. Other companies insist that all training be done under the company

roof; so completely do they follow this principle that they set up veritable universities within the company.

The location of training classes depends largely upon the type of training under consideration. If the training involves the use of special equipment or machinery to be found only on company premises, then training obviously must be given within the plant. This is true of on-the-job and vestibule training, as well as of some apprentice training. On the other hand, in those types of training for which the equipment is not highly specialized, such as in stenography, comptometer operation, billing, and machine accounting, it may be both easier and more economical to send trainees to local schools that have adequate facilities.

The reason most often given for off-premises training is that it makes possible the elimination of distractions and interference arising from proximity to the work area. If the suggestion given elsewhere in this chapter for the selection of training rooms is followed, that is, if rooms provide the necessary degree of freedom from interruption, this objection to in-plant training loses its validity. In fact, the experience of most training directors indicates that training should be conducted on company premises unless physical limitations interfere. The training done can thus be more readily controlled and is more closely identified with the sponsoring company.

Rooms and Furnishings

Another factor that warrants thoughtful consideration in the planning of a training program is the housing of that program. There is evidence in existing practice of a failure to recognize the importance of this factor.

Some companies, in the establishment of their physical training facilities, have observed an austerity and a frugality reminiscent of the old red schoolhouse. Conference rooms and classrooms are barren, cold, and uninspiring. Generally they are set up on the basis of expediency. When it is decided that a company ought to do some training, there is an offhand effort to find some space not in use. The training room, therefore, is likely to be an unused supply room, an outmoded office, or a corner of a drafty warehouse.

A few basic criteria may serve to measure existing training facilities, and to aid in planning for new ones.

1. *The housing and the furnishings set up for training should reflect the conviction of management that training is both important and permanent.* However unfortunate it may be, the importance and

prestige and therefore the accomplishments of the training program are to some extent measured and determined by outward appearances. So long as training departments must accept castoff rooms and shoddy furnishings, they cannot command respect or function adequately.

2. *Training facilities should be designed to foster rather than impede learning.* Training quarters should be so situated as to minimize distractions. They should be sufficiently remote from work areas to escape the noise and the traffic of the office or shop. There should be no telephones in the class or conference rooms. Few calls are so urgent that they cannot wait until a meeting is ended.

Classrooms must be pleasant, attractively decorated, light, and well ventilated, if the mastery of skills and the equally important development of wholesome cooperative attitudes are to be acquired most effectively. Chairs should be comfortable enough to sustain the trainee through extended sessions. Cramped legs and calluses have never yet smoothed the path of learning. When the attention of trainees is centered upon bodily discomfort, they cannot devote it to learning. This means that teaching must face an obstacle, which at worst may be insuperable and at best reduces results by dividing student attention.

Most training rooms are too hot and humid for the best mental work. For discussion or creative thought and activity, a temperature between 65 and 70 degrees with proper relative humidity is best. Again and again, teachers try to stimulate thinking with every skill and technique at their command, while room temperatures of 75 to 85 degrees and humidity reaching 95 per cent stifle thought and invoke sleep.

It should be possible for trainees to relax, to enjoy a smoke, and at the same time to concentrate on the business at hand. To facilitate this comfort and concentration, even such insignificant things as provision of adequate ash trays, paper and pencils for taking notes, and place cards to make possible ready identification and to break down initial barriers of strangeness are extremely important.

3. *Facilities must be adequate for efficient presentation of information.* Blackboards, projection screens, and display easels are necessary tools of the instructor. As in any other profession or trade, a complete set of tools is necessary for the accomplishment of a good job.

Determining the Make-Up of Groups

A problem facing the training director, particularly in supervisor training, is the proper composition of class groups. Should an effort be made to limit each class to persons with similar jobs, or to those with the same level of responsibility, or to those with the same background and experience? What is the most effective method of grouping?

Grouping may follow one of two principal plans. The division may be vertical or horizontal. In the case of vertical grouping, as it is customarily used in industrial and commercial training, the practice is to include within a class of supervisors representatives of the various supervisory levels from the bottom to the top of the organization. The second type of grouping, the horizontal, provides for a situation in which all trainees are on essentially the same level of responsibility.

Each of the methods of grouping described has certain advantages. The vertical method is democratic, permits sharing of experience, encourages the flow of suggestions and criticisms up and down in the organization. On the other hand, it may result in the stifling of discussion at all levels because top management is present. Moreover, it places together individuals whose background and current interests differ so widely that they may have difficulty in reaching a common ground for discussion.

The horizontal method groups persons whose interests would naturally throw them together. Training thus becomes more practical, more immediately applicable. On the other hand, it tends to stratify the organization and to isolate one level from another. It may also create a situation in which ideas, suggestions, and criticisms do not lead to the action that would make them meaningful.

To meet the need appropriate to a given level of instruction, groups should be as nearly homogeneous in make-up as possible. Too great divergence in experience, interest, or ability will make it extremely difficult for the instructor to render his training meaningful to everyone at the same time. Too rigid an adherence to either vertical or horizontal grouping should be avoided. Wherever possible, the trainee should be placed where he will be stimulated and encouraged most fully and where his contribution to the group will be greatest. However, practical considerations which lie beyond the instructor's control, such as shifts, production demands, time and space limitations, and transportation problems, may interfere with the ideal class groupings.

How Large Should Classes Be?

Several criteria should be used to determine the optimum number of persons to be included in any class or conference.

1. *How much individual participation is desired?* If it is intended that the training be conducted on a conference basis, then there should be no more than twenty persons in the conference group. Ten to fifteen is a more desirable number. If the group is too large, it is impossible for each conferee to participate fully, and in consequence he fails to obtain full benefit from the meeting. The aggressive or talkative persons present in any group tend to monopolize class time and to squeeze out timid or reticent members. On the other hand, too small a group, four or five for example, tends to kill discussion by removing the opportunity for variety in opinions and ideas which a large group makes possible. Some persons are diffident and reluctant to express themselves in a group so small that they feel conspicuous. They need either the support of their fellows or the relative anonymity provided by a large group.

2. *How much individual instruction is necessary?* If the training involves a considerable amount of individual instruction—as may be the case in certain types of apprentice training, vestibule instruction, and training in clerical or stenographic skills—then the class must be held to a small number. In such cases, ten to twelve may represent desirable top figures, while the minimum number will be set by overall cost. It seldom is possible to justify training classes for only one or two persons. On the other hand, there is no economy in setting up such a large group that many of its members do not profit from the instruction. Economy in training is achieved through results per dollar of expenditure, not through numbers trained.

3. *Is instruction to be on a lecture basis?* Experience in college and university education, where much of the instruction is given through lectures, indicates that as many as thirty-five students can be taught effectively by this method. While some lecture courses in our largest universities enroll as many as two thousand persons, it is generally conceded that some effectiveness is lost with this extreme size, simply because the individuals in the group come to feel lost and unimportant. They can no longer feel an intimate relationship between themselves and the instructors, and the training taking place assumes a sort of mass-production aspect.

4. *How many persons will the training facilities accommodate?* Obviously there is no point in setting up a training class so large that

there is an insufficient number of machines or typewriters or experimental facilities to accommodate the group. Available facilities therefore may limit the size of the class. Moreover, there is nothing more harmful to the effectiveness of a training class or conference than to hold such a meeting in a room in which table space or ventilation is inadequate for the number of persons present. Comfort, as we already have said, is not a frill designed to pamper trainees. It is a practical necessity if training is to give profitable results.

How Often Should Meetings Be Held?

Students of the psychology of learning have devoted considerable research to the problem of *massed* versus *spaced* learning. In everyday language massed learning means learning which is concentrated, as opposed to spaced learning, which is spread out over a longer period of time and which allows for intervals of rest and thought between practice sessions. The evidence appears to point in almost every instance to the desirability of spaced learning. Although laboratory experimentation has dealt mainly with rest intervals of short duration, results seem to indicate that it is more desirable in the scheduling of classes or conferences to hold meetings fortnightly, weekly, or semiweekly, than to subject the trainee to a concentrated barrage of eight hours a day for a continuous period of several days. This is especially true when the training in question involves theory or principles. There must of necessity be an opportunity for the learner to digest these principles and theories, and an opportunity to practice them through application. One of the grievous mistakes committed in some types of training is to summon a group of supervisors or salesmen into a meeting for a continuous period of a week or two weeks, during which time they are belabored with more information and exhortation than the human mind can absorb. The result is likely to be confusion, indifference, or frustration on the part of the weary trainees.

On the other hand, research has also demonstrated that it is possible for the intervals between learning sessions to be too long. If too long a period elapses, forgetting sets in and negates original learning. It would be unwise in the institution of a supervisor training program, for example, to hold meetings or conferences less frequently than once every two weeks. Meetings once a month or less often provide too much opportunity for the learners to forget and to lose sight of the continuity and relationship existing in any well-planned program.

How Long Should the Class Period Be?

Another question that arises with relation to the scheduling of classes is the length of the class period. Is there an ideal length of time for a class? The answer to this question appears to be *no*. Too much depends upon the nature of the training being undertaken, the physical conditions under which the training is done, the learner, and the type of instructor. The only sound generalization seems to be that a class must not be so long as to produce boredom and fatigue on the part of the learner, yet long enough to do its work. A conference may very well run as long as two hours, if it is well planned and if the leader is alert and able. Any longer period than this would probably overtax the trainee's receptivity. On the other hand, a conference much less than an hour in length is too short to permit maximum accomplishment. Lectures should seldom be more than an hour in length. If they are to extend beyond an hour, it is wise to provide for a breathing spell in the middle of the session, during which trainees can relax, smoke, chat, and stretch their legs. To some extent, the optimum length of the class period depends upon the ability of the instructor; an interesting and able teacher can hold the attention of a group much longer than a mediocre instructor can.

At What Hour Should Classes Be Scheduled?

The training director must decide at what hour to schedule classes and conferences. There are a few basic principles that guide him in coming to decisions.

1. *Research indicates that learning takes place most readily when the student is fresh.* This confirms the common-sense conclusion that classes and conferences held in the morning are generally more fruitful than those held late in the day. It is usually inefficient to conduct training at the conclusion of a shift or workday, when trainees are fatigued and therefore lack both ability and desire to concentrate on the matters at hand.

2. *Class hours should be arranged to conflict as little as possible with normal schedules.* For example, it would not be well to schedule a meeting of supervisors at the beginning or end of a shift or workday, when they would ordinarily be planning their work, making assignments, or tying together loose ends of the day's activities. When a meeting is scheduled at such an hour, the persons attending may find it difficult to concentrate because of their concern about work which they should be doing elsewhere. Similarly, in the case of non-

supervisory employees, the scheduling of classes at or near the end of a shift conflicts with their normal desire to go home, and is therefore unsatisfactory.

3. *When training is done during other than working hours, it should be scheduled just prior to the beginning of the workday or sufficiently long after its conclusion to give trainees an opportunity for rest and recreation before returning to class.* It must be recognized, however, that it is more difficult to maintain a high percentage of attendance when trainees, having left work for the comfort and relaxation of their homes, are expected to come back to classes.

Should Training Be Conducted on Company's or Trainee's Time?

The answer to this question depends largely upon one's conception of the purpose and value of training. One would hardly expect an employee to perform work beneficial to the organization by which he is employed unless he was compensated for the time so spent. The object of training so far as business and industry are concerned is fundamentally selfish, although constructively so. For the most part, companies train employees in order to make them better able to perform those functions for which they are being paid—an improvement of direct consequence and benefit to the organization. The fact that great benefit accrues to the employee is in many cases secondary to the main objective of increased efficiency. It follows, therefore, that by participating in a training program an employee is in a very real sense performing a service for the company by which he is employed, at the same time that he is being aided in his personal growth. Since this is the case, it is reasonable to expect that he should be compensated for the time so spent.

There is, however, a school of thought which maintains that human nature is such that people appreciate only those things for which they make some sacrifice. Therefore, argue the proponents of this theory, if a man takes training on his own time and at some personal cost to himself, he will appreciate it more and consequently get more from it. While there is some truth in this assertion, it hardly can justify an organization's failure to assume its rightful burden in financing training.

Some companies follow a divided course in the matter of time spent in training. They make it a practice to give on company time that training which is of direct use to an employee on the job he holds or to which he may soon be promoted. On the other hand,

training of a cultural or recreational nature, which has only an indirect bearing on the employee's usefulness to the company, is given on the employee's time.

Any company sufficiently convinced of the value of education to institute a training program should insure the success of that program in every way possible. Holding training on company time is one way of insuring maximum attendance and most complete control of the training being done. It is therefore a way of contributing directly to optimum training results.

How Should Instructors Be Paid?

In some types of training, especially in on-the-job training of employees, many companies use experienced workers as instructors. These workers are carefully selected and trained in the fashion outlined in Chapter 16.

The question of payment to these instructors is a matter that can be troublesome unless it is handled properly. Beyond doubt, a certain amount of prestige accompanies the appointment of an employee as an instructor. By virtue of the appointment, he has been singled out among his fellows for his competence and ability. However, prestige alone will scarcely compensate him for the added responsibility of teaching. It certainly will not suffice if by teaching he suffers a loss in his earnings as a worker.

It seems safe to say that in any instance when an operator is called upon to assist management in one of its functions, such as training, it is only fair that this person should be paid for his time at a higher rate than that of his regular job. The general practice appears to be to pay the instructor's regular job rate plus a suitable bonus.

Some training programs grade instructors according to their proficiency and length of service, paying the grade B, or less experienced, instructors one uniform bonus and the grade A, or veteran, instructors a bonus of twice as much. An alternate procedure is to establish a regular instructor's rate. The difficulty with such a system, however, is that there is such a range in levels of compensation of the various instructors who will be used that a blanket rate for instructors will work an injustice on some who normally receive top wages.

Regardless of the method of compensation arrived at, every step should be taken to guarantee instructors against any loss of earnings, and beyond that to assure them payment commensurate with their added responsibility.

What Constitutes a Reasonable Teaching Schedule?

One of the fallacies held most tenaciously by many executives is that an eight-hour day is an eight-hour day regardless of the type of work performed. This is not true of teaching. Eight hours spent in classwork is too grueling a program for an instructor to be able to perform with proficiency. It is conceivable that there may be instances under the pressure of an emergency when an instructor may be called on to work a continuous stretch of this sort. It should be recognized, however, that he cannot achieve acceptable results at this rate, nor can he maintain the pace for any length of time.

The maximum teaching load should be no more than four hours in any eight-hour day, and these four hours should not be continuous. The reasons for this are twofold. First, teaching, unlike some other occupations, requires at least as much time in preparation as is spent in actual instruction. In other words, the instructor should spend at least four hours preparing for every four hours spent in class. It follows that the eight-hour day allows time for no more than the prescribed four-hour teaching load. Second, teaching, if it is well done, is both physically and emotionally taxing. The instructor, whether he is delivering a lecture, leading a conference, or guiding trainees through the intricacies of some operation, must work at top pitch. He has no opportunity, as he might have in other types of work, to relax and take an occasional breather. So long as he is before the class, he must be constantly on the alert to present his subject, to answer questions or foresee them, and to measure the effect of his instruction on the trainee.

No person responsible for the supervision of training should ask an instructor to assume a load heavier than the one indicated unless he is willing to burn out his teacher and to lower drastically the quality of instruction. The training director who is required both to administer a program and to do some teaching cannot be expected to approach this four-hour maximum teaching load.

Of course this four-hour load limit would not apply to many on-the-job instructors whose major activity is an unhurried supervision of individual learners as they run part of a job on the plant floor. This is more a matter of individual coaching than classroom or group instruction and does not require the lesson preparation and high degree of effort that group leadership requires. Therefore this type of coaching activity may be done for a full shift without harm to the instructor.

What Should Be the Attendance Requirements for Course Completion?

In almost any training program or course, it is customary to award trainees some recognition upon successful completion of their training. This recognition—through certificates, diplomas, and personnel records—will be discussed later.

A natural question that arises in this connection is the attendance requirement to be imposed upon trainees as a condition of successful completion of the course. Obviously, trainees cannot be permitted to attend simply at their own convenience. On the other hand, since they may have a great many demands on their time, both at work and outside, it is reasonable to allow them some margin short of perfect attendance.

A formula which has been adopted by many training programs sets 80 per cent attendance as the minimum requirement. Trainees completing the required 80 per cent are eligible for certificates in the event that their performance has been satisfactory. It will be wise in setting up a training program or course to establish such a minimum requirement and to make it well known in advance to all persons concerned. While this may seem to encourage absenteeism, such has not been found to be the case. On the contrary, it generally serves to encourage the less regular trainee to watch his attendance. It goes without saying that the institution of any such attendance requirement calls for the careful maintenance of records to substantiate the use of the formula.

What Training Records Should Be Kept?

Like any other unit in a modern business organization, the training department must be prepared to measure and to give an accounting of its own productivity. In part this involves the evaluation of training results in terms of lowered employee turnover, fewer grievances, reduced waste and spoilage costs, and the hundred other evidences of an effective training job. It involves also an accounting for time spent: records of courses, attendance, hours consumed, number of persons trained, etc. Finally, it involves the individual performance records by means of which the training biography of each employee is kept.

In organizations where the training program is spread out over a wide area or throughout several plants, the following form may be used as a control by the training director.

1. For Week Beginning.....19—, and Ending.....19—. Month Day Month Day
2. Name of Class..... 3. Instructor.....
4. Station..... 5. Time of Meeting: From.....M. To.....M.
6. No. Hrs. Per Day Class Met..... 7. No. Days Per Wk. Class Met.....
8. Average Number in Attendance for the Week:.....
9. Remarks:
-
-
-

Mail to Director of Training Weekly

Instructor's Signature

Date..... Month Day

Form 5. Weekly Training Report—Northwest Airlines, Inc.

An example of the individual employee record is the "Notice of Training Completion" form illustrated in Form 6.

LOCKHEED AIRCRAFT CORPORATION	
NOTICE OF TRAINING COMPLETION	
NAME _____ EMPLOYEE NO. _____ DEPT. _____ PLANT _____	
THIS IS TO CERTIFY THAT THE EMPLOYEE NAMED ABOVE HAS SUCCESSFULLY COMPLETED THE TRAINING DESCRIBED BELOW:	
Course: _____	Number of Hours: _____
Given By: _____	Completion Date: _____
Taken on Company Time <input type="checkbox"/>	Taken on Employee's Own Time <input type="checkbox"/>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center; margin: 0;">ATTENTION: DEPARTMENT CLERK</p> <p style="margin: 0;">It is important that you post the above information to the Service Record Sheet of the Employee's Kardex immediately. After posting, initial below and give this Notice to the Employee.</p> <p style="margin: 0; text-align: center;">Posted By: _____</p> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p style="text-align: center; margin: 0;">EMPLOYEE PLEASE NOTE</p> <p style="margin: 0;">When initialed in the proper space at the left, this Notice indicates the training above has been posted to your Kardex.</p> </div>
<div style="display: flex; justify-content: space-between;"> <div>DEPARTMENT AND EMPLOYEE'S COPY</div> <div>TRAINING MANAGER _____</div> </div>	

FORM 4266A-2

Form 6. Notice of Training Completion

Formula for Measuring Amount of Training

One of the minor but typical problems in connection with the reporting of training activities is the absence of any standardized formula for computing and presenting an understandable figure on the amount of training done. It is difficult for units within an organization or for separate companies to evaluate their own training in terms of the amount done in comparison with other companies. While it is fully recognized that the number of hours spent in training or the number of persons taught is of less importance than the final good accomplished, there is still need for a device to measure production as well as quality in training.

A very simple formula and the one most frequently employed is: *Number of class meetings* \times *Hours per class* \times *Number of employees per class* = *Total manhours of training*. Since the gross figure thus arrived at is obviously weighted in favor of the large organization, a further refinement of the formula is suggested to include the factor of company size. The formula would then read thus:

Number of classes \times *Hours per class* \times *Number of persons per class* \div *Total number of employees* = *Per capita manhours of training*.

This formula, employed with a full recognition of its limitations as a complete measure of training values, may be extremely useful in a comparison of the training efforts of separate plants or units within a single company, of the many units of a government agency, or of companies within a large industry. Personnel directors also may find it as helpful in the comparison of the activity of their training programs as the formula for accident frequency and severity is in comparison of safety records. In fact, whenever there is need for a concise, standard statement of the amount of training being done in any company, this formula may be applied.

How Should Successful Completion of Training Courses Be Recognized?

Any employee who successfully completes a company training course has, we assume, added to his own personal stature and thereby gained sufficiently to be compensated for his efforts. Many executives feel that an additional reward is unnecessary; that the fanfare of graduations and diplomas is inappropriate to the business scene and should be reserved for the schools and colleges.

CORNING GLASS WORKS
Training Program Certificate

This is to certify that

.....
 has successfully completed the hour course in

 conducted by the Corning Glass Works Training Department

..... 19.....
 Instructor

.....
 Supervisor of Training



Erie Railroad

CERTIFICATE OF TRAINING



To

who has studied and applied Erie's educational
 courses and is now qualified to teach Job Training

PRESIDENT

Northwest Airlines

CERTIFICATE OF RECOGNITION
SUPERVISORY TRAINING

This is to certify that
 HAS SATISFACTORILY COMPLETED THE FOLLOWING SUPERVISORY TRAINING COURSES:




IN CONSIDERATION OF THESE ACCOMPLISHMENTS, THIS CERTIFICATE IS AWARDED

.....
 Department Head


.....
 Director of Training

.....
 President and General Manager




Walter Kidde & Company, Inc.

BELLEVILLE, NEW JERSEY




This is to certify that



has been granted this
Certificate
 as evidence of having completed a training course
 WITHIN INDUSTRY


Course

Sponsored by **Walter Kidde & Company, Inc.**



.....
 Training Supervisor

.....
 Division Head

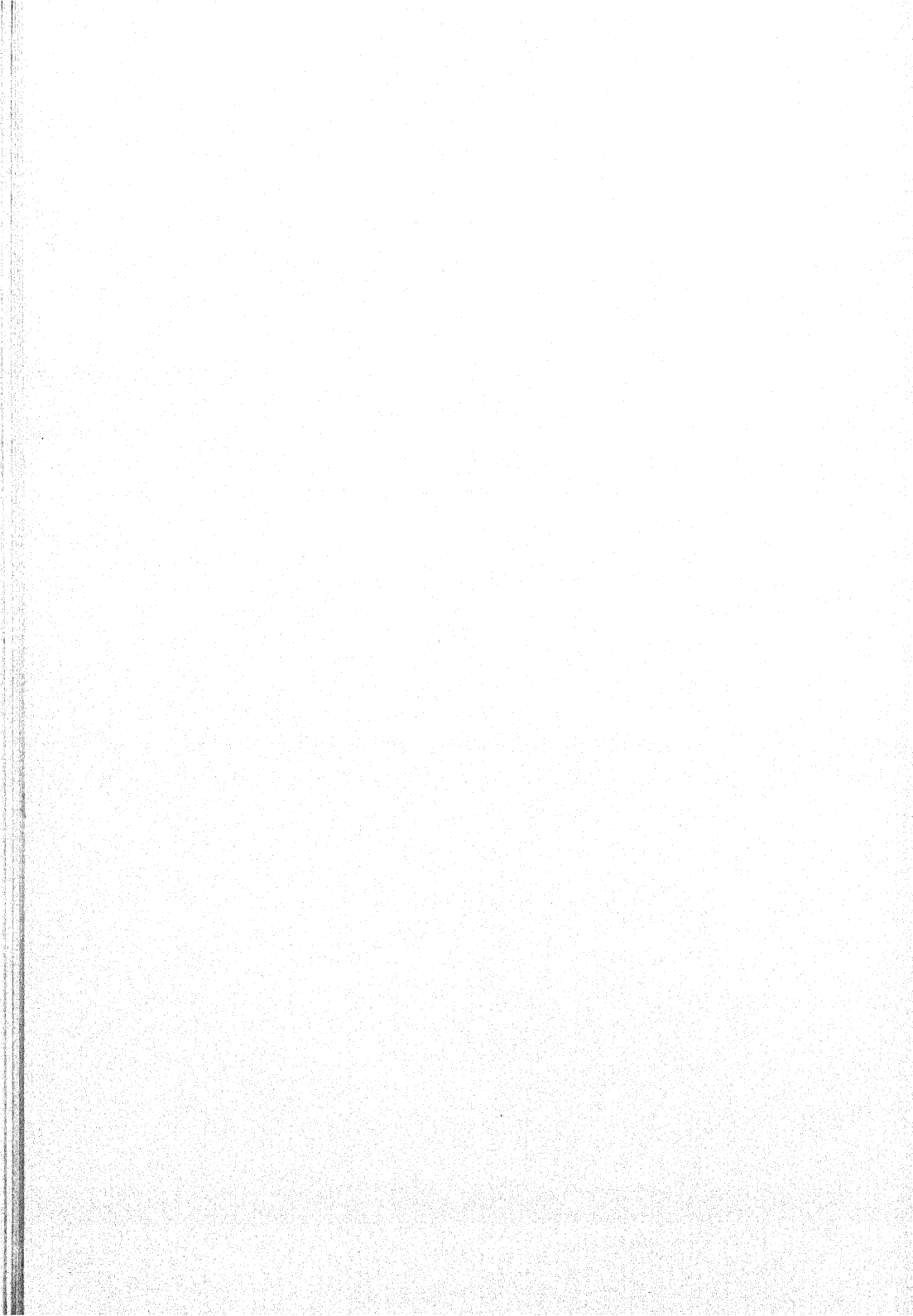


Those training men who have made use of such devices have come to a different conclusion. Experience has convinced them that employees appreciate some formal recognition of their success. In accordance with this they gladly receive and preserve such diplomas and certificates as they may earn through training. It is not unusual to find diplomas conspicuously displayed on office walls, or to find small certificates carefully tucked away in wallets. In Form 7 are shown sample certificates used by several well-known training programs.

As another form of recognition, there is a definite use for publicity of an indirect sort, in which the emphasis is more on individual employees than on the training program as such. In the local newspapers or in the house organ it is possible from time to time to highlight a story on employees who have completed a training course, or employees who are being promoted and who have earned this promotion in part by their study and self-improvement.

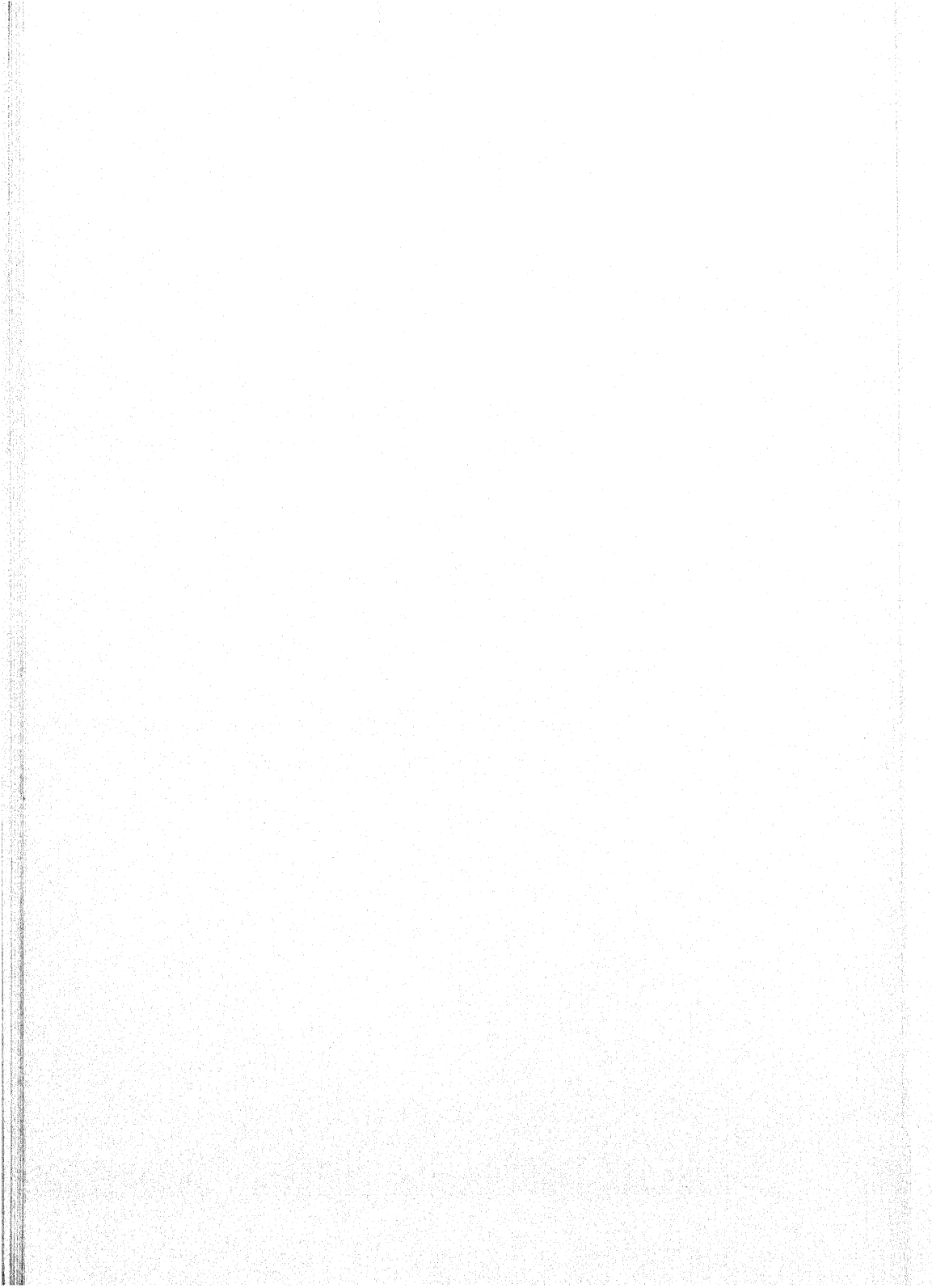
Summary

It is obviously impossible in so short a space to do more than sketch a few of the most common problems in the mechanics of training and to suggest partial solutions to these problems. Again it should be said that these mechanics of training are less important than the basic aims and objectives. It will profit a training man little to have his training program a monument to efficient classroom management if he has no idea where he is going. On the other hand, the accomplishment of his goals will be made easier if he will give attention to these many small but important mechanics of training. An otherwise well-conceived program can founder for lack of attention to those details that contribute to the comfort, receptivity, and security of the learner.



PART III

TEACHING AND THE TRAINING PROGRAM



CHAPTER 9

TEACHING AIDS

Good teaching aids are indispensable to good instruction. A child learns much more quickly and effectively about the effect of a hot stove by touching one than by being told that a hot stove will burn when touched. Of course the principle involved is not that children should be taught about stoves by burning themselves, but rather that people learn more quickly, effectively, and permanently when the lesson is sensed vividly and directly. The senses are the medium, the road to learning.

Closely allied to the principle of sensory perception is an equally basic law of learning, which is extremely important in industrial training—namely, one learns by doing, by directly participating in the experience. As a sailor learns about ships by going to sea, similarly one can learn best how to grow corn by actually growing corn, and one can learn most about industrial subjects by participating directly in the industrial problem, by directly sensing it. A corollary to this principle is that if it is not possible to have the learner participate directly in the problem exactly as he will experience it later, then the lesson should be “staged” by the use of various teaching aids in such a way that the lesson studied will closely approximate the experience eventually to be met by the learner. An example of this “problem staging” is to have a supervisor act out the proper method of disciplining an employee in a supervisor training class.

Most teaching aids—movies, charts, diagrams, flyers, study guides, pictures, outlines, demonstrations—are means of bringing about a closer and more meaningful sensing of the lesson involved. They are means of staging the problem so that it approximates the experience that will be faced by the learner when the lesson is finished.

Teaching aids of an increasing variety and number are coming to be used more and more frequently in all types of instruction, in the colleges and the armed forces as well as in industry. A study of the Army Specialized Training Program, made by students and staff members at the University of Michigan, showed that the use of a great variety of training aids was one of the largest factors contributing to the recognized success of Armed Forces Training during World War II.

One of the major reasons for the success of industrial training in recent years has been the willingness of instructors to break away from the traditional school pattern where the teacher lectures and the student listens. Industrial training directors have been among the first to apply the principle that a student must sense a problem directly, vividly, and in varied ways in order to learn well and quickly. Words alone may contain great meaning; but when unaided by more direct sense impressors, they are likely to go in one ear and out the other. A host of intelligently used teaching aids is fundamental to good instruction in industry and business.

The following teaching aids will be discussed in this chapter in the order listed: (1) lesson plans, (2) job sheets, (3) films, (4) charts and posters, (5) mock-ups, (6) dramatizations, (7) demonstrations and observation trips, (8) case studies, (9) flyers, and (10) tests.

Of the teaching aids listed above, the individual lesson plan is the only one primarily an aid to the instructor rather than a sense impressor for the learner. Therefore, it will be discussed first.

The Individual Lesson Plan

Over and over again, we have urged that industrial and business conferences and classes should follow a plan of orderly and directed teaching toward definitely prescribed goals. Training should not be a wandering, undirected discussion in which learners are expected to happen upon information as to what they should know or do. In so far as industrial training must rely upon real teaching, upon deliberate leading of hands, minds, and feelings toward ends of skill, knowledge, and attitude, to that degree a lesson plan is important.

The lesson or instruction plan is the instructor's master plan of teaching strategy. It shows where the instructors want to lead the learners. It indicates the problem which, when presented to the learner, will evoke a feeling of need for study. It points out to the instructor the place and time for showing a particular chart, diagram, or piece of equipment which furnishes part of the answer to the problem raised. It indicates the nature and timing of numerous other teaching aids designed to impress the learners by way of sight, hearing, touch, emotion, or reason.

The Lesson Plan Illustrated.—The Veterans Administration's lesson plan entitled *How to Cut Stencils* is presented below. It is an example of a detailed, complete lesson plan which includes the use of a large variety of training aids.

*Points to Bring Out**Method to Use*

- | | |
|---|---|
| <p>4. How many of you have had previous instruction in performing this duty?</p> <p>5. What circumstances might arise in your office which would necessitate your doing this job?</p> | <p>Get examples and get a show of hands.</p> <p>Cite examples of various kinds of duplicating which can be done with stencil and mimeograph, i.e., training manuals, office forms, posters, announcements, etc.</p> |
|---|---|

(5 minutes to here)

PRESENTATION AND DEVELOPMENT

*Points to Bring Out**Method to Use*

- | | |
|---|--|
| <p>1. Principle of stencil duplication: A stencil is a waterproof sheet of material that when perforated will allow an opening for ink to pass through and produce an exact image of the opening on anything it contacts. The heart of the process is the stencil sheet. The duplicator is simply the machine to which the stencil is attached, and which contains the ink that is transmitted through the openings in the stencil to produce the image on paper. The machine regulates the flow of ink and holds the stencil and paper in place to make sure the image is reproduced on the paper in the desired position.</p> | <p>Explain process, using machine or slides to illustrate points.</p> <p>Show stencil already cut, and copy from which it was cut.</p> <p>Have group examine material in kit: rough copy, stencil cushion sheet.</p> |
|---|--|

(15 minutes to here)

- | | |
|---|--|
| <p>2. Demonstration.</p> <p> (a) Preparing typewriter for use in cutting stencil.</p> <p> (b) Preparing stencil for cutting.</p> <p> (c) Actual cutting of stencil.</p> <p>3. Proofreading for error.</p> <p> (a) Use of light.</p> <p>4. Making corrections.</p> <p>5. Use of styli.</p> | <p>Explain while demonstrating the job.</p> <p>Go over job sheet step by step, demonstrating and explaining each step. Be sure typewriter and stencil are in such a position that all trainees may see.</p> <p>Complete demonstration.</p> <p>Demonstrate uses of various styli. (See "Writing on Stencils" and A. B. Dick materials.)</p> |
|---|--|

(25 minutes to here)

PRACTICE AND PERFORMANCE

Points to Bring Out

1. Preparing to cut a stencil.
2. Preparing typewriter for use in cutting stencil.
3. Preparing stencil for cutting.
4. Actual cutting of stencil.
5. Proofreading for error.
6. Making corrections.

Method to Use

Have each trainee prepare a stencil from rough draft in the kit.

Use job breakdown sheet for reference when necessary.

Walk about among group and give assistance when needed.

(50 minutes to here)

REVIEW AND DISCUSSION

Points to Bring Out

1. Effectiveness of duplicating process depends upon skill used in cutting original stencil, so that finished product is clean, attractive, easily legible.
2. Points to be given special attention:
 - (a) Careful centering of copy.
 - (b) Clean type.
 - (c) Typewriter ribbon not used.
 - (d) Firm, even touch on the keys to produce uniform type, punctuation marks and underscore lightly struck.
 - (e) Careful corrections.
 - (f) Skillful use of stylus in hand work.

Method to Use

Draw from the group and put on blackboard.

(60 minutes to here)

Proper Use of the Lesson Plan.—Detailed, formalized lesson plans are sometimes criticized as being too “cut and dried” to be of much value in informal, democratic industrial conferences. This criticism is justified when lesson plans are not made flexible and adaptable to all possible situations in the classroom. The lesson plan should provide for alternative ways to stimulate the learners. A question asked of one audience may immediately stimulate discussion; the same question may leave another group cold and unresponsive.

In addition, the lesson plan should anticipate thoughts, questions, and resistances. A knowledge of what a group of persons will think

and say about a given question is one of the instructor's greatest assets. Apparent contradictions brought up by class members often serve as the best introduction to the next learning step.

The lesson plan should be changed constantly to reflect new experiences of the instructor in teaching the same lesson to new groups. Possibly one of the greatest criticisms of the lesson plan is that many instructors do not, as a routine matter, constantly alter the plan to include new lessons, new refinements, more effective teaching aids, and more stimulating approaches.

The Job Sheet

The job sheet, or study guide, is often used as a teaching aid in connection with the lesson plan. The job sheet is simply a breakdown of one job or operation into the minute, step-by-step acts of which it is composed. This breakdown is most valuable in teaching such operations as riveting, typing, and metal work. The sheet is usually given to the learner after the general phases of the job have been discussed and demonstrated, and it acts as the learner's guide when he attempts for the first time to perform the job himself.

The Job Sheet Illustrated.—An excellent example of the job sheet is the one used by the Veterans Administration in connection with the lesson plan for stencil cutting.

JOB SHEET FOR STENCIL CUTTING

<i>Step (What to Do)</i>	<i>Key Points (How to Do It Right)</i>	<i>What You Need to Know</i>
1. Procure stencil from supply.	Requisition.	Form 118, Office Requisition for Supplies, is used.
2. Procure thin fiber cushion sheet unless one is furnished with the stencil.		
3. Prepare typewriter to cut stencil.	Clean type on typewriter thoroughly with type-cleaning brush so that the impression of type on stencil will be clean cut. Place ribbon indicator in stencil position. Move knob to white marking.	Type should be cleaned before cutting each stencil.
4. Prepare stencil for use.	Place typed draft between face of stencil and backing sheet. To show where	Some types of cushion sheets have no waxed portion.

<i>Step (What to Do)</i>	<i>Key Points (How to Do It Right)</i>	<i>What You Need to Know</i>
	to begin typing, mark stencil with correction fluid, with aid of typed draft. Remove typed draft. Insert cushion sheet, waxed side against stencil. Unwaxed side is next stencil for work done by stylus.	
5. Insert stencil in typewriter with cushion sheet between backing and face of stencil.	Insert so that cardboard backing is against platen roll.	
6. Set margin stops.	Gauge stops so as to confine writing within the lines marked on face of stencil, using marks made previously. Center with the line extending down the center of stencil.	Meaning of stencil markings: Numbers down the left and right indicate number of lines of typing possible to cut on stencil. Gauge at bottom and top of stencil indicates number of characters to line possible to cut on stencil. Smaller gauge for elite type (84 characters); larger for pica type (70 characters) including spaces.
7. Cut the stencil.	Strike the keys with a firm, even touch. Strike the punctuation marks and underscore with slightly less force.	If stencil is to be signed, place a piece of cellophane over stencil so that stylus does not rip membrane.
8. Make corrections and proofread stencil.	Rub incorrect characters with glass rod provided for the purpose or with the rounded edge of a paper clip. Apply a thin coating of correction fluid over the incorrect characters with thin, light strokes of the brush. Allow a few minutes to dry. Type the correction; do not strike keys too hard.	
9. Clean the platen.	Feed a sheet of blotting paper through the machine.	This will pick up much of the stencil oil before it has dried on the rubber parts.
10. Prepare typewriter for office use.	Move ribbon indicator to "blue" position. Clean the type.	Type should be cleaned after each stencil is cut.

Proper Use of the Job Sheet.—Several points should be remembered in preparing and using the job sheet:

1. The job sheet is only a part of the total lesson plan. Its use should be preceded by preparation, presentation, and demonstration activities by the instructor, and it should be followed up with each individual. Too often job sheets are given to the learner without preparing him for the job ahead.

2. The key points of the job should be plainly evident.

3. The job sheet should not be cluttered with unnecessary detail. It should contain essential information about the operation but should not go into details of related information. Related information, such as definitions of terms, should be taught before the job sheet is given out.

4. Too many job sheets are made up by technical experts who assume that learners know more of the terms and procedures of the lesson than they actually do. Each term and each procedure in the job sheet should be examined in the light of the knowledge the learner can be expected to have at that stage in his training.

Films

Motion pictures and slide films suitable for training deal with a wide variety of subjects, from aerodynamics to human engineering.¹ Films should be used in connection with a larger teaching plan that includes learner participation, group discussion, charts, tours, problem solutions, etc. When properly integrated with the whole plan of instruction, films can be among the most effective of all teaching aids.

Proper Use of Films.—There are several points to remember in the use of films as a training aid:

1. A great number of poorly prepared films are now used in industrial training. It is better not to use a film than to use a poor one. *Select films with care.*

2. One of the most common faults of industrial training films is overemphasis, by means of exaggerated action and words, in the effort to make a point. As a result, both the film and its lesson seem absurd or unreal and impractical. *Avoid overemphatic films.*

3. Many industrial films are made primarily for employees and lower-level management. Showing these oversimplified films to higher levels can draw quick criticism from busy management representatives, who have had some previous training in the principles

¹ Many film catalog sources are listed by Haas and Packer in their excellent book, *The Preparation and Use of Visual Aids*, New York, Prentice-Hall, Inc., 1946.

taught in the film. *Select films to fit the ability and experience of your group.*

4. Films lack meaning if they have been made in a radically different setting from that in which they are used. It is very difficult, for example, to sell an audience of office supervisors on principles of work organization if the visual setting is the shop. This difficulty applies even though the principles of the lesson may be applicable universally. *Choose films that fit the jobs represented by the audience.*

5. Too often, films are only incidental to the major topics being studied. Some instructors even show films for the sake of a break in routine, or for variety. Such films waste time and destroy unity and coherence in teaching. *Make sure that each film bears directly upon the lesson.*

Advantages of Films.—If used correctly, films offer these advantages to the industrial trainer:

1. Films lend authority to what the instructor has said. The principles involved in a lesson are somehow made to seem more important, more basic, more universally accepted, and more necessary, when the learner sees them projected in pictures and words. Films are excellent “clinchers” of lessons.

2. Films can simultaneously bring to bear a relatively large number of stimuli to sight, hearing, emotion, reason, and other faculties.

3. Abstractions, such as the concept of interdependence of employee and employer, can be taught effectively by means of films, since many vivid and specific illustrations which put the abstract concept into concrete, everyday terms can be shown. Teaching of this kind is most difficult when words alone are used.

4. Unlike the lecture or conference, films are completely controlled and wholly consistent from one presentation to the next; this makes them especially valuable in instruction which aims at a specific emotional appeal.

5. Films can be used to say, without offense, things which an instructor or even the top executive of a company might hesitate to put into spoken words because of close acquaintance with the learners and the subsequent danger of offending.

Charts and Posters

Charts and posters may be used effectively by the industrial trainer for a number of purposes and in a variety of training activities. They may be employed inside the conference room to motivate, to present

facts, or to summarize lessons. They may also be used outside the conference room and in the plant to highlight specific bits of information that may or may not relate to what is being taught in the formal training meetings.

Unlike films and film strips, one of the great advantages of charts and posters as teaching aids is that their preparation does not require specialized skills and knowledge seldom found in training departments. Charts can be prepared quickly, with little equipment, and they can be adapted fully to local setting and conditions. Charts and posters effectively center attention. A lecturer seldom can be sure that the learners' thoughts are in focus with his own. Such unity is made more probable when both are looking at a chart that graphically presents the point of an oral exposition.

In conferences that demand considerable lecturing, charts form an invaluable supplement to words. Not only do they serve as relief; they *reinforce* hearing with sight, and through symbols give graphic and stable meaning to spoken and therefore passing words. The sudden unveiling of a chart may furnish the slight dramatics needed to make a point interesting, vivid, and remembered. Humorous charts can provide, in addition to interest and relaxation, a sure means of permanently impressing the learner. When the point contains a warning or criticism, humor removes the sting.

Well-prepared charts are especially useful in the motivation step of teaching. A simple chart showing the cost of waste or the frequency rate of accidents can be most effective in the preparatory step of showing the problem and of stimulating discussion aimed at its solution. Charts can also be used advantageously to give previews of conferences, or as control devices to outline and emphasize the scope and limitations of discussions.

In addition to classroom use, many industrial trainers use charts and posters to carry on educational campaigns in the plant, campaigns which may receive no attention in formal classes. Commercially prepared charts and poster series may be used, or the training department itself may prepare series on subjects ranging from the need of cooperation and friendliness among employees to fire prevention.

The advantage of such a method is that many persons, while in the direct work environment, will see the charts and see them often. Of course the use of charts and posters alone has many limitations. They can serve effectively to remind persons of points that need re-emphasis or that have been forgotten. They can even serve to put across a new bit of information or a new idea. But charts and posters

alone cannot be expected to make continuous, permanent, and significant changes in human behavior. Such changes can come about only through the coordinated use of many training methods and techniques, of which charts and posters are only one.

Proper Use of Charts and Posters.—Industrial trainers should remember these points in preparing and using charts and posters:

1. Illustrations should be as simple as possible. At least half the charts and posters in use today contain complicated illustrations which should be omitted. The number of words used should be kept to a minimum.
2. Many charts used in industrial conferences are too small, or contain printing and pictures too small to be interpreted by all the class members. In-class charts and posters should be tested before they are used to make sure that they are large enough for the room.
3. Colors should be used to carry the message, to attract attention, and to rest the eyes.
4. The central idea of each chart should be one that will receive major development in class.
5. Charts should be made to stimulate learner participation rather than to compete with it.
6. Instructors should constantly remind themselves that they must talk to the learners, not to the chart. This demands thorough familiarity with the chart and its significance.
7. Wise instructors will form an unbreakable habit of examining charts before class to see that they are in order and that equipment for their use is available.
8. Two or three charts used at key points in a conference can aid teaching and stimulate learning. Ten or fifteen charts used indiscriminately throughout the conference can dull the learners' reactions to them and can even become a brake to participation and a teaching handicap.

Mock-Ups

The term "mock-up" is usually associated with a mounting of the component parts of a three-dimensional object for instruction purposes. In addition to this meaning, we are using the term here to include miniatures, such as a plant model, and facsimiles, such as a mounted fire extinguisher.

Probably the most common purpose for which mock-ups are used is to show component parts. An instrument, a machine, or a manufactured product is disassembled, and the parts are mounted or other-

wise arranged for ease and effectiveness of instruction. Mock-ups are also used to isolate and simplify the particulars of a lesson. An example of this is the practice often followed of stripping an engine of all parts which do not relate directly to the engineering function being taught at the time.

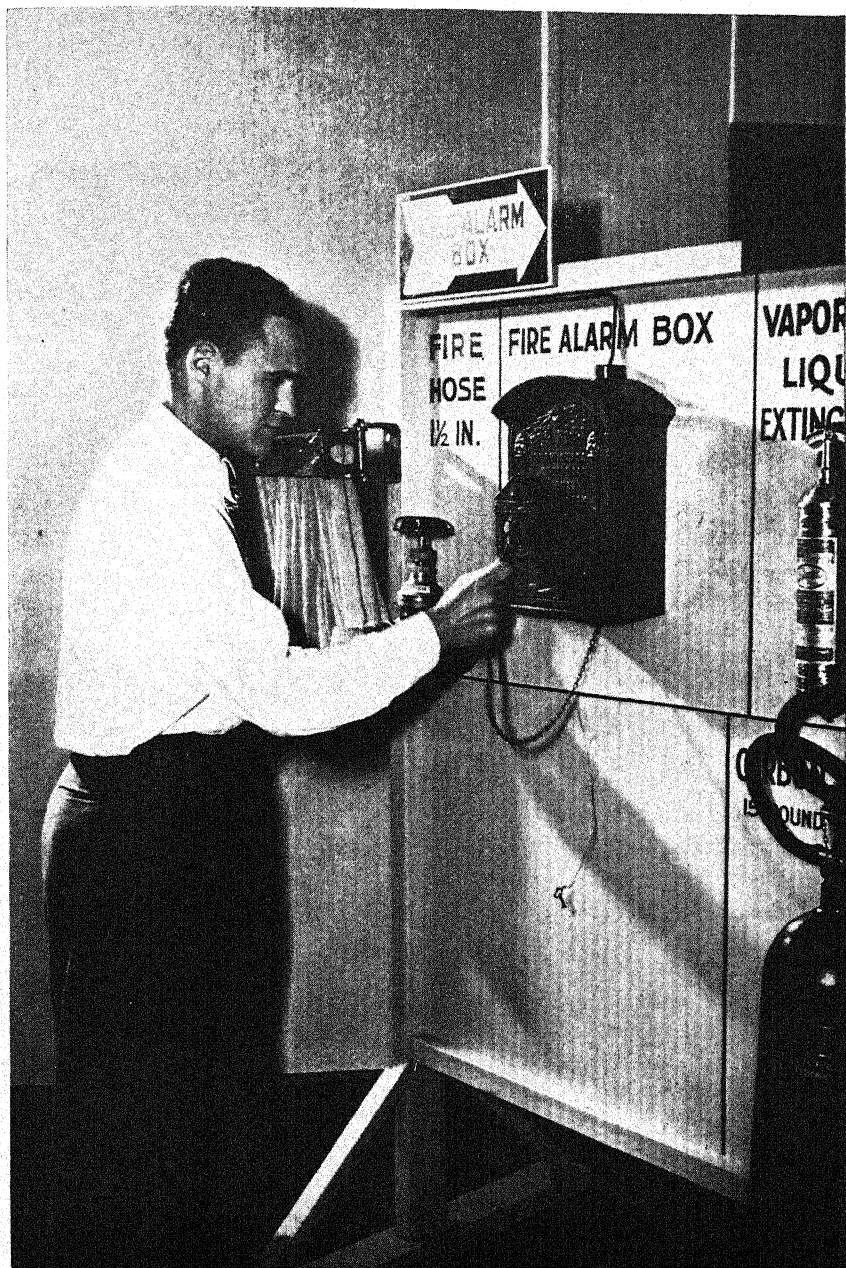
"Cross sectioning" is a frequently found application of the mock-up technique. It is especially valuable for instruction in objects which have hidden parts, such as houses, motors, or shoes. Miniatures and models can be used to show the special relationship of a specific part to a whole, like the relationship of the water sprinkler system to the plant, or the relationship of one department or one building to the remainder of the buildings on the lot.

Of special value in orienting new employees and in educating the public in the processes and products of the plant is the use of miniatures or sand-table arrangements which show the departments, machines, and raw materials that go into the manufacture of the product.

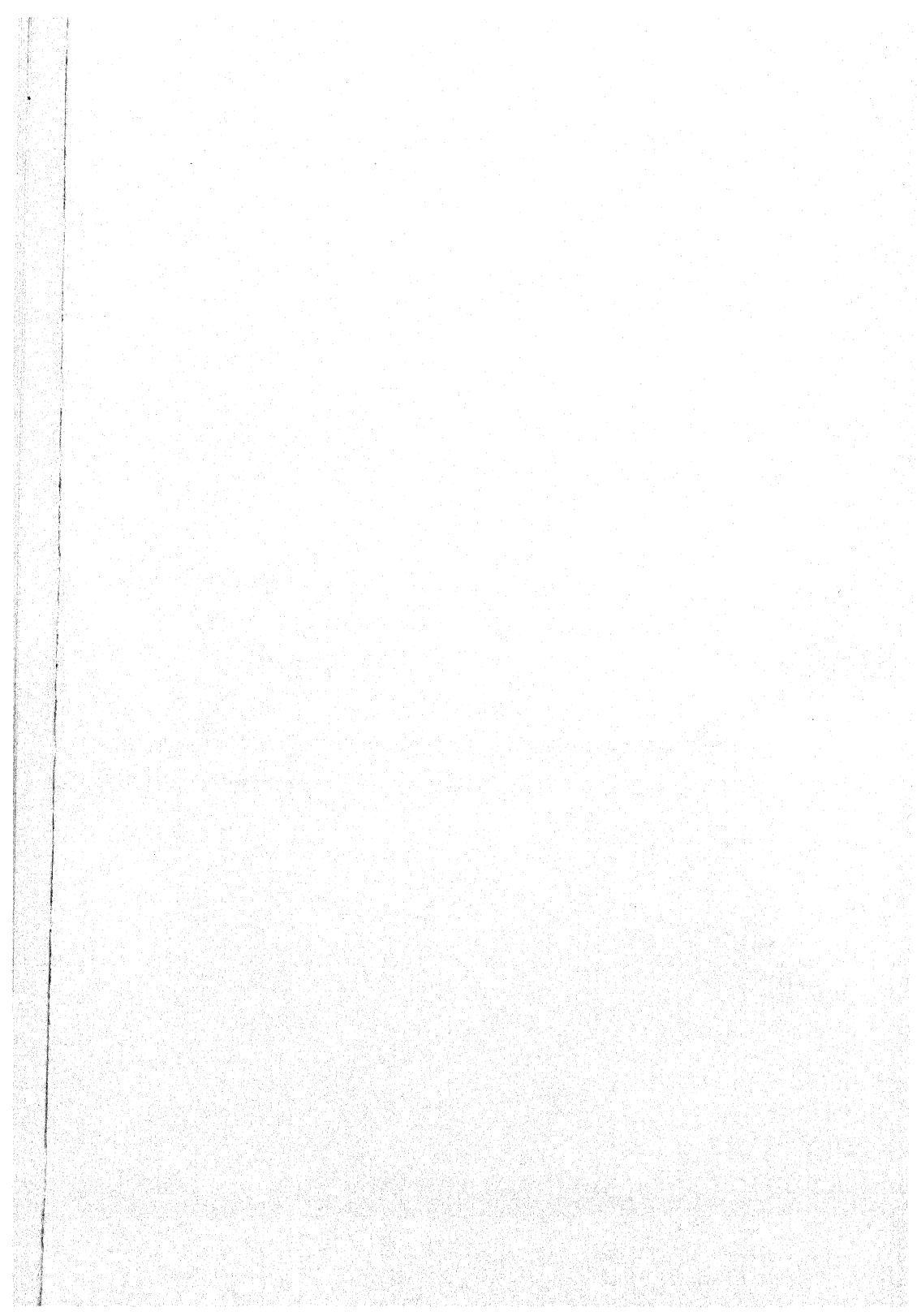
An outstanding example of miniatures used for this purpose is found in the Esso Training Center at Elizabeth, New Jersey. Shown in model and sample are the complete refineries and the products in their various stages of development. Service stations and locomotives are also shown to illustrate distribution and end use of the products.

There has been some faulty use of mock-ups in industrial training. In conference rooms everywhere it is not uncommon to see mountings of metal and wood objects which have no relation whatever to the topic being studied. In some cases the mock-up is dust-laden and pushed to a dark corner of the training room. In other cases the mock-up stands polished and shining in a conspicuous place, fairly shouting for trainee attention, yet bearing no relationship to the topic under discussion. This may be due to failure to remove the teaching aid following its use in a previous lesson, or because the trainer feels that the very fact of having in the room physical objects which can be seen and felt is an indication of the practicality of the training being done.

Mock-ups should be used only as aids for specific teaching purposes. They should bear directly on the principles being studied. They should be in evidence only for the period during which study relating to them is being carried on.



Form 8. Mock-Up for Fire-Fighting Training



Dramatization

Dramatization is one of the most colorful, lifelike, and vivid teaching aids available to the industrial trainer. It cannot be used extensively in manual and technical training, but it can be a valuable tool in social or "idea" training.

Chapter 14 will bring out the importance of directed "role playing" in the development of supervisors. Through observation and study, supervisors must incorporate within their personality an accepted role, an effective way of acting in relation to their subordinates.

Many supervisors are bosses instead of leaders, because their experience has shown them only that way of acting. Consequently, that role becomes dominant. Dramatization can aid in the instruction of these supervisors by showing and enlisting their participation in the new and more desirable parts they should play. In training conferences, supervisors can participate in dramatization, or they can criticize the actions of others in such leadership activities as giving orders, inducting the new worker, accepting grievances, and reprimanding. Dramatization is especially effective in teaching of this kind because it more closely simulates the actual problem as it will be met by the supervisor than does the lecture or even the conference method. Probably the most effective use of it is in the practice phase of study, following the use of the conference method and such teaching aids as movies and charts.

Sometimes dramatization is used at the beginning of a meeting to create interest and stimulate discussion. The class members are asked to evaluate and criticize the acts of the drama. This is one of the surest ways to promote learners' interest and participation.

Dramatization can also be used to do direct teaching, to pass on ideas and bits of information. In some companies the distribution of the sales dollar is taught primarily by dramatization. "Cutting the sales-dollar pie" is the most common use of dramatization to this end. One company holds small group meetings of employees and begins the class by first selling a dollar's worth of the company's product to a class member. Employees are then called to the front of the room to represent profit, wages, and the other components of the sales dollar. The dollar received from the selling of the product is then divided among the class members.

Demonstration and Observation Trips

The main value of the use of demonstration and observation trips in teaching lies in the varied senses exercised by the learner and the consequent nearness to the actual problem brought about. Industrial training has made frequent and profitable use of this teaching aid. The "showing" step has been accepted as necessary in good training, especially in the development of manual and technical skills. In this kind of training, telling, showing, and doing—in that order—have become the recognized highway to learner progress in skills. Training directors could profit from a wider use of the demonstration and observation techniques in the more abstract kinds of teaching which are aimed primarily at knowledge and attitude. In-class demonstrations can be used to give employees a basic understanding and appreciation of such important and often misunderstood company practices as time study, job evaluation, and wage rates. It is difficult to sell employees and even supervisors on work measurement and job standards without demonstrating to them that all the variable factors of daily work can be taken into account and objectively measured.

One of the most common needs in industry is increased understanding and cooperation between departments whose materials and work processes are related. A simple demonstration and observation trip, in which employees of one department are shown the work and problems of their neighbors, can do wonders to foster cooperation. This has been proved time and time again, yet relatively few industries have an organized program of telling and showing employees of one department the relationship between the quality of their own work and the work of their associates.

Observation trips can also be used profitably in the orientation of new employees and in the advanced orientation of experienced workers. These tours, like all observation tours, should be well planned and carefully organized. A mere trip through the plant is not enough. The learner should be prepared before the trip begins. The tour and its purposes should be explained. Key points to look for should be stated. Where possible, a check list of things to watch for should be used. Where the noise of machinery is too loud for conversation, illustrated, printed guidebooks explaining the machines and processes are helpful. The groups taken on tour should be small, so that all can hear and see. Since observation trips invariably raise questions in the minds of those in attendance, there should be a question period after the trip is over.

Case Studies

Case studies are used mostly in training for knowledge and attitude, although some of them have been used effectively in such training as quality control, waste control, and safety. Case studies can be used to present a problem and create interest in solving it. They can also be used, after principles have been discussed, to apply the principles studied. They are excellent in-class devices for putting generalities into practice. They not only simulate real problems, but are controlled versions of them, so arranged as to emphasize a principle which might be more obscure in an actual life and work problem. With each new case studied, the abstract principles are vitalized and given new and broader meaning and application.

In preparing case studies, these points should be kept in mind:

1. The instructor should know exactly what he wants to bring out and the case should be so worded as to high light this point.
2. Many cases presented to industrial training classes are too extreme. The principles and methods will be more effectively taught if the case seems practical and reasonable.
3. Since trainees are often distracted from the case study by attempts to guess whom the characters in the case actually represent, the characters should not be identifiable.
4. Although "canned" studies are available on almost any subject, the instructor should prepare local case studies, based on local job classifications, materials, processes, and problems.

Flyers

Flyers are out-of-class pictorial or written material—at most a few pages—that reviews, previews, or high lights educational material. Flyers are often used to advertise and announce such training department offerings as new classes, new books in the library, a new film, or a guest speaker.

Flyers have been used in different industries for these purposes:

1. One supervisor training conference series was followed up by the distribution of a calendar which summarized the high lights of these meetings.
2. One training department prepared for the supervisors a small, four-page pamphlet which summarized a new labor law.
3. A group of supervisors held a meeting on rotation training. Some weeks later, an article on this subject appeared in a national

magazine. The training director condensed this article and sent it to the supervisors, even though they had already completed discussion of the subject in the training meetings.

4. One company prepared one-page bulletins which summarized such phases of human relations as how to give orders and how to reprimand. These bulletins were sent to all supervisors, although the subject had not been discussed or studied in formal conferences.

Flyers can be used most effectively to make training continuous. By using flyers, the training department has an additional method of emphasizing a point already discussed, and can follow up an idea without holding a formal class.

Tests

Subject matter tests (we are not concerned here with psychological tests) can be used to aid teaching for a few limited purposes:

1. Subject matter tests can be used to locate the strengths and weaknesses of employees and supervisors, to indicate which topics need to be discussed and which topics are already understood.

One of the most fundamental mistakes in industrial training is that of pitching the level of discussion too high or too low for a given group. In most cases we assume, or rather guess, what a given level of employees knows or does not know about such things as safety rules, company policy, the company financial situation, profit, method of figuring pay, insurance, quality control, and other important areas of knowledge. Tests can give some indication of employee and supervisor knowledge of these things. If the tests prove that top management highly overestimates what employees do know about important company employee matters, as is often the case, then this fact can be used to sell the need for training as well as to point out specific points for emphasis in instruction.

2. Tests can be used to measure change and to evaluate the effectiveness of instruction.

3. Especially in instruction of presupervisor groups and in a few other groups where frequent tests are not likely to be resented, tests given at the beginning of instruction and at intervals as instruction proceeds can be a stimulus to learning as well as a measure of the individual ability of the learners.

4. Test questions are often used in industrial training as devices to stimulate discussion and so channel thinking that the desired principles will be developed.

True-False Test Illustrated.—Here a true-false test is designed to stimulate discussion and to emphasize certain principles. Each question is discussed separately.

Do you agree or disagree with the following statements?

1. It is safe to say that the fewer the complaints the better the department. No complaints are a good sign; many complaints are a bad sign.
2. From the standpoint of the person doing the complaining, a gripe is never a small one; it is always big and important.
3. In handling a complaint, the good leader goes on the basis that a complaint is as big as the employee thinks it is.
4. It is a good policy to help an employee save face when a complaint turns out to be unjustified.
5. When a complaint is based on false information it is best to stop a man before he finishes his gripe rather than let him make a fool of himself by going on.
6. Lots of our problems solve themselves when we air them.
7. A complaint usually seems smaller after we tell someone about it.
8. A complaint grows bigger if we go against human nature in handling it, even though the facts are on our side.
9. Most of the time a complaint is based on facts.
10. It is human nature for a person to be blind to the real reason why he is complaining.

Some training men have criticized tests as being too impractical and academic for industrial training. The critics argue that most of the important kinds of knowledge and skill cannot be measured by tests. In addition, since industrial workers are not accustomed to paper-and-pencil situations, they may resent being asked to take tests. There is, no doubt, some truth to this argument. As a rule, tests are highly unpopular with almost all industrial worker groups. They can cause dissatisfaction and difficulty if indiscriminately used. However, for the limited purposes described, we believe some good use can be made of them.

Some industrial trainers, who are interested only in finding the knowledge level of the group or the effectiveness of good instruction, give true-false tests, but ask the trainees not to submit their names with the returned tests. The resentment that industrial workers have toward tests will often be curbed if they realize that the information is needed as an aid to the instructor.

Summary

The teaching aids discussed in this chapter are: (1) the lesson plan, (2) job sheets, (3) films, (4) charts and posters, (5) mock-ups, (6) dramatizations, (7) demonstrations and observation trips, (8) case studies, (9) flyers, and (10) tests.

Good teaching aids are indispensable to good instruction. They bring about in the learner the simultaneous use of several senses, thereby making lessons more meaningful. They shorten learning time greatly. The success of Armed Forces Training during the late war was due largely to the frequent use of a great variety of training aids.

CHAPTER 10

TEACHING IN BUSINESS AND INDUSTRY

Characteristics of Present-Day Training

Recommendations for improving the practice of teaching in American commerce and industry can be most valuable if they follow and grow out of an analysis of current training practice. While conditions vary in different parts of the country and in different industries, the characteristics set forth below are general.

1. The large majority of teachers in American industry, as we know, are not professionally trained in the science of education. Teaching, therefore, usually must take one of two undesired extremes.

In some instances it is too formalized, even memorized. Lacking a teacher skilled in informal presentation and adaptation to the needs of individuals, someone sets up a master outline or a completely written lecture, calls together a few persons who have seldom or never taught, and asks them to memorize this presentation. They do so and then pass it on with decreasing effectiveness to group after group of trainees. Occasionally efforts are made to vitalize the performance. In these instances, the instructor asks a few stock questions and expects stock answers, so much so that he often feels at a loss if he does not get the expected response. In some popular wartime courses, memorization went so far that gestures, attitudes, and specific questions were provided for exact spots in the prepared script or outline. In military service thousands of orientation lectures followed this plan. Where the course presents great amounts of information rapidly, where no discussion or critical questioning is to be allowed, and where skilled teachers are unavailable, it is a necessary method. It is quick and easy, but it usually yields few and temporary results. Unfortunately, we still have too many master outlines and memorized performances in industry.

At the opposite extreme is a type of training that becomes too undirected, loose, and purposeless. This is usually true of the overworked "free" conference, in which men meet supposedly to share experiences and to solve problems under the chairmanship of a conference leader who confines his leading to maintaining order and recognizing speakers by their nicknames. This purports to be a

democratic device offering and encouraging full participation, but the free conference suffers because the leader fears to teach or even to appear to know more than the conferees. As a result, he fails to contribute to or guide the discussion. This is a stubborn vestige of the old tradition that trainees know the best answers, and if they are left alone to confer freely, these answers will emerge spontaneously and win a miraculously full acceptance, all without the "interference" of the teacher.

This overcautious approach makes the trainer reluctant to imply that supervisors, technicians, or experienced operators may be wrong. Even full-time training men in many instances are hardly supposed to know right methods or principles from wrong. They are not recognized as competent in what they are teaching. They are conference leaders, operating an unscientific Gallup Poll in situations where pooled judgment prevails. Might, as found in strength of voice or prestige of position, all too often makes right and determines what is taught and learned in such cases.

Lacking the confidence and skill which would make possible the reasonable freedom characteristic of true teaching, nonprofessional teachers either have been forced to dominate and rigidly control the situation with memorized presentation or have relinquished control and even guidance, as in the overuse of the free conference.

2. Training is also characterized by overreliance upon gadgets, equipment, art, pictures, and films. In the right proportion and in close relation to the context of teaching, there can be nothing but praise for the use of teaching aids, but many expensive teaching devices are dragged in without being related to the instruction. Some instructors become more interested in color and carpentry, in models and mock-ups, and in the childish appeal of their own creations than in the value of the devices for stimulating learning. Nonprofessional teachers, unable to maintain interest in the subject matter itself, may try to obtain it through the originality or grandeur of their gadgets. Teaching thus becomes nothing more than an excuse for the display of elaborate but pointless learning contrivances.

3. Most training programs lack broad, long-term objectives. As a result, each training unit stands alone, instead of being integrated with and supporting other units in a full program designed to analyze the individual trainee, strengthen his weaknesses, and use his growing ability in jobs of ever increasing challenge. Continuity of learning and planned growth of the individual are therefore missing.

4. In its favor it must be said that industrial teaching is unhampered by conventional dogma. It has greater freedom to ex-

periment with new method and new content than does public or even collegiate education. Where experiment is lacking in industrial training we must blame overwork or the lethargy of the teacher rather than other restrictions upon his creative activity.

Differences Between Industrial Teaching and School and College Instruction

Another way to view industrial teaching, before making recommendations for its improvement, is to compare teaching in offices and shops with that found in public and private schools and colleges. There are many major differences which are important to persons already in training work and to those preparing to enter it themselves or preparing others to enter it. These differences are as follows :

1. In schools the primary job is learning. Teaching and trainees are primary; everything else gives way to them. The building is provided, the students are recruited, the staff trained, and the program financed, all for one primary purpose: to make learning possible. In business, on the other hand, industrial proficiency—as demonstrated by improvement in making out a sales receipt, keeping a stock record, receiving a visitor, sealing a package, soldering a connection—becomes the primary objective. Training is given to help workers to perform their work better, and it is given at a time when it will least interfere with production. Training is secondary to production, and it exists mainly because it can help production. This is the hardest thing for the academic schoolroom instructor to learn when he begins to teach in commerce.

2. Training does not follow routine; it is not even regular. In formal school work the instructor teaches the same subject at the same hour, day after day, possibly even year after year. In industry a course may be given once or several times in one season, and then never offered again. It also may be given year after year, but revised to fit constantly shifting conditions and varying purposes.

3. Schedules are seldom definite in industrial training. They must be subject to change at a moment's notice, depending upon sales, production schedules, absences, machine breakdowns, work shifts, vacations, and even the availability of classrooms and instructors. The industrial teacher cannot allow himself to be upset by this irregularity; he must be prepared to wrestle with his educational problem on a catch-as-catch-can basis.

4. The industrial teacher requires more creative ability and originality in curriculum construction than does his school or college colleague. He teaches a greater variety of courses on shorter notice and in more diverse areas of learning. He has no state syllabus to fall back on, and very often no textbooks to serve as guides. Teachers are therefore required who can prepare and teach a wide variety of courses quickly and effectively.

5. In industrial training the teacher does not, as he does in schools, meet with unquestioned acceptance of his every word. The real practitioner—the foreman, the department head, the supervisor, or the technician—is traditionally the authority on subject matter. The trainees usually look up to the man who turns out the product or service that keeps the enterprise going, and the teacher's status as an authority is decreased accordingly.

6. In industry, training deals with things that are real and practical; what is learned is applied immediately. This gives an added meaning and purpose to teaching, thus stimulating the trainees and making teaching easier. Public and private schools are much further removed from real problems and practical living. Except in such fields as athletics, schools still prepare students for events that are remote.

7. Business training offers almost no disciplinary problems. Most trainees are mature, serious, and beyond the age of creating adolescent distractions.

8. Trainees in business classes are not recruited and held, like students in colleges and private and public schools, by attendance laws, parental will, social pressure, and threat of punishment. The teacher in business must hold his learners by the value of his work, and this value is measured not by himself nor by custom, but by unconstrained trainees. Consequently, instruction must be good. It must be what the trainee needs and feels he can profit from. He is always free to drop the course if it drags or if it seems to offer less profit than a dozen alternatives, such as gardening, golf, overtime work, reading, or trips to the beach, the mountains, or the city. The industrial trainer offers his wares in competition with a host of commercial, civic, fraternal, and family enterprises. Wage-earning adults are faced with problems of taxes, child care, food purchases, family budgets and finance, car repair, and home furnishing. The competition for their time, both within and without the family, is keen; if they are to undertake training voluntarily or with enthusiasm, the training must be highly valuable.

9. A class of industrial or office trainees usually varies more widely in ability than does a formal school group. Sometimes the training class contains specialists who know more about certain subjects than the instructor does. Others in the same class may be novices. This makes it mandatory that the teacher adapt his teaching to individual needs.

10. Many trainees have experienced grave difficulties with formal schooling. Some failed or dropped out of school; others received low grades or were forced to take courses which they bitterly resented. They enter in-plant training classes with doubt, fear, or antagonism toward teachers, texts, and learning activities. Since this attitude presents a formidable challenge to training instructors, those teachers who are unwilling to try where others have failed should avoid this field of education.

11. Little outside preparation can be expected from working trainees. Very few classes in business give assignments or use regular texts. The recitation method, which is so rigidly followed in public and private schools, and which usually depends upon a textbook or other reading assignment, is therefore less appropriate to industrial and commercial training. Teachers, fortunately for their trainees, must devise a variety of other more timesaving, lifelike, meaningful methods which take the place of outside reading and study and which must be presented vigorously and effectively.

12. Schools still are inclined to present a maximum of facts, principles, and data that are unrelated or only loosely related to any major problem. Industry goes to the other extreme. It too frequently starts with the problem and tries to solve it without the study, principle, or facts that will help toward an effective solution. The only justification for subject matter in industry has been its relation to a specific, immediate problem, and the problem has almost always had to come first. Analysis shows, however, that this reluctance to consider appropriate data until they are related to a specific and oftentimes urgent problem has gone so far that there is a tendency to prefer "common sense" in solving problems to authoritative, factual, or research data. There is also a tendency to make training corrective rather than preventive.

13. There is little individual competition in industrial training. Trainees seldom compete as obviously or as directly with each other as do students in public schools. The competitive appeal is less frequently used. Tests and marks also play a less important role. Trainees compete more against their own records and past per-

formances; they try for promotions, upgrading, merit advances, or other real or monetary evidences of their own progress.

14. Industry gives better financial and tangible awards to its teachers than does public education. The instructor who prepares and presents a successful course for a plant manager or a department head is more likely to be praised for his success than is the public school teacher who offers a comparable service, and he is certain to be better paid. On the other hand, he is more directly responsible for results. If his trainees fail, management will know it, ask for an explanation, and demand improvement.

Principles of Industrial Teaching

Having surveyed the conditions and customs surrounding modern industrial training, we can now select from among scores of principles of teaching a very few which relate most pertinently to the conditions described above, and which, if followed, will make the greatest and fastest improvement in business and industrial training as it exists today. The four major principles of teaching are:

1. Teaching should be meaningful.
2. Teaching should provide for self-activity.
3. Teaching should help the learner to establish clear purposes.
4. Teaching should be adapted to individual needs.

Meaningful Teaching—Its Importance in Learning.—All teaching should have *meaning* to the learner. Words, ideas, concepts, appreciations, and motor adaptations must be understandable and have reality and significance to the learner.

Simple illustrations of the importance of meaning abound, but are often ignored in teaching. The stranger in need of directions is told: "Go two blocks north," when he has no idea where north lies. But if the stranger is told: "You are headed west; turn right and go two blocks north," he is given a point of departure which makes the directions meaningful. To be meaningful, new information must be related to old; it must have association and points of relation and orientation.

An incident involving two small children, observed by one of the writers, illustrates the importance of meaning in learning. The first day of the week which they learned to identify by name was Saturday, when both parents were at home, played with the children, worked with them in the garden, or otherwise gave them attention. The

word Saturday became associated with pleasure; it therefore had meaning and significance and was quickly learned.

A five-year-old girl was recently given a twenty-five-cent weekly allowance. The immediate interest and growth in "number" concepts was startling. Within a month she could count by fives and tens and could add dimes up to fifty cents. She learned to count to one hundred, talked freely about saving her money, and shopped carefully, comparing her allowance and savings with prices. This led to anticipation and planning of her spending, a sensitivity toward values, and many interesting experiences. "Number" came to have a new meaning, reality, and purpose. It dealt with something she had, something she could use.

One more illustration of meaning may help. An old gentleman and his wife were being conducted through a large industrial city. They were mildly but politely interested, but when the guide casually remarked that they were passing the factory of a nationally known cash register company, the pair immediately became alert. Both had worked for the company in their youth. The guide was quick to notice their kindling interest and took advantage of it. He showed them a housing development built by the company. Their interest in its landscaping and flowers led to a visit to the city parks, also supported by their onetime employer. Because of one old association and an alert teacher, the city's parks, government, educational advantages, and even people came to take on a new meaning. The old couple established a basic association, tying the city, at first big and cold, with the meaningful, pleasant experiences of their youth.

Good teachers constantly seek these meaningful relations. They are inventive, suggestive, alert, original. They are forever opening doors and arranging enticing avenues through which a learner can be led into self-sustained, meaningful experiences.

Chapter 18 shows how one training program, designed to make employees interested in and conscious of the distribution of the company sales dollar, was preceded by a unit on "buymanship" and another on keeping the family budget, both designed to give a meaningful, personal point of departure for teaching economic terms and simple principles regarding the management of the company's finances, when they would come up in the course later on.

During a training session on the suggestion system, which was planned to encourage employee participation in it, conferees were asked to engage in an experiment in which they would attempt to improve a simple job method. The job involved separating differently colored pegs into two groups—an artificial task in no way related

to the trainees' actual work. The class watched listlessly, and only a few trainees offered half-hearted suggestions for improvement.

After this experiment another operation was demonstrated and once again the trainees were invited to offer improvements. This time, however, the job demonstrated was taken from the factory. All the employees present were familiar with the work and several had actually done it. After the demonstration all members of the group vied with each other in an attempt to improve the method. After the meeting several trainees were so interested that they conferred with the manager of the suggestion system and proposed an improvement on the operation. This suggestion was accepted, paid for, and installed.

This shows that a real job, one that has meaning to the learners, is far more valuable for teaching purposes than a synthetic one. For this reason, many training directors using the Job Instructor Training (JIT) course of the War Manpower Commission abandoned the fire underwriters' knot and substituted actual production jobs from their own offices or factories.

In another instance a unit of a large company had been losing money regularly. Investigation showed that carelessness and inattention to quality were the primary causes. Employees were called together, asked to assist, and invited to participate in a training program designed to improve quality. The next step was to make the teaching meaningful. To do this, a score of customer complaints were selected at random from recent correspondence. Letter after letter was read aloud to show trainees the reality of the problem and the specific acts of carelessness on their part that had provoked complaint. Next, the comptroller gave an illustrated talk on the company's precarious financial position, and the sales director displayed charts showing the decline in sales and the accompanying increase in returned goods and rejects. All this provided meaning for the instruction. The problem was the real, personal one of saving the company and thereby the jobs of company employees. From this program came practical suggestions that were welcomed by supervision, and an employee realization of the importance of quality in job security. The personnel director of the company later reported materially improved quality, reduced customer complaints, and increased sales.

In another case employees were taught the principles of business economics, and were then asked to evaluate the training. One report was so highly enthusiastic that the training director asked the student why he found this training so profitable. When the trainee said that

he was about to start a business of his own, the reason for his enthusiasm at once became apparent. For him the subject had a more immediate meaning than it held for the rest of the class.

It is sometimes said that only unskilled or manual workers have difficulty in finding meanings, in relating other matters to their own experience. That this is not true is shown by the following experience. A group of fairly high level office supervisors attended a training class which explained the personnel department's orientation program for new employees. The purpose of the teaching was to show what the personnel department was doing for new employees before they reported to work, and to outline the additional induction steps expected from these supervisors when the new employee reported to them. Toward the end of the conference a film was shown, illustrating how a metal trades foreman inducted his new employees. The instructor in charge explained that although this was a shop film, the principles and even the techniques of on-the-job induction were the same for the shop and the office. He showed the film, briefly reviewed the major points, and showed their similarity to suggestions brought out by the conferees earlier. On the day following this training, the training director, as was his custom, called upon the office supervisors for an evaluation. Although the instructor who had done the teaching rated high among the training staff and had led this conference many times with success, still the trainees were very critical of his efforts. Nobody gave the conference a high rating. During the evaluation interview about one third of those in the class said that they had not liked the shop picture. They pointed out that they were office employees and conditions were much different in offices. All this came about in spite of the fact that the instructor had tried to show that the principles and techniques of induction were the same, regardless of the physical conditions surrounding the worker. Even these high level office supervisors were unable to see meaning for them in shop conditions.

Rules for Making Teaching Meaningful.—Admittedly it is not easy for teachers to make their instruction meaningful, especially if they are beginners or are unfamiliar with educational psychology. The following suggestions are made to lessen this difficulty:

1. Wherever possible, make all aspects of the instruction true to life. Use departmental pictures, floor plans, mock-ups, flyers, equipment, or any other physical devices that link the classroom with the operating division. Check these teaching materials frequently to make sure that they contain problems, or at least illustrations, which

are currently vital in the departments from which trainees come. It is surprising how quickly references to events, problems, or persons known to the trainee will vitalize instruction.

2. If trainees have a technical vocabulary including essential job or operation terms, learn the terms and use them when needed. Not only does this show acquaintance with the job; the use of familiar words helps to bridge the gap between practical operations and less well-known teachings. A teacher, who is unacquainted with his subject matter or his trainees, can improve his teaching and learn simple job terminology by spending a day or two in the department or at the work from which the trainees are drawn. This does not imply that an inexperienced teacher can learn the whole terminology of a technical field or a trade in a day or two. It does mean, however, that he can learn enough job terms to make semiskill, supervisory, or general education easier.

3. Let trainees occasionally steer the discussion somewhat freely, but always within the framework outlined by the objectives. In so doing they may place the emphasis upon those things which are real, vital, and meaningful to them. When a class too often takes the teaching in its own hands and directs it away from the instructor's plans, the latter should examine the event carefully, asking why the trainees did this, inquiring into what meaning their chosen discussion had for them, and why they preferred this activity to one he had planned for them.

4. Strive for effective oral presentation. Remember the popular lecturer's rule: "Tell what you are going to say, say it, and then tell what you have said." But avoid mere repetition; rephrase, shift emphasis, or approach the goal from different base points. At the same time, illustrate, compare, and vivify. Try to create reality by citing cases drawn from real, immediate, practical situations. Shop and office illustrations are most valuable, but home situations and examples taken from current newspapers should be introduced for variety.

5. Direct the teaching toward the persons taught—not as so many individuals, but as individuals conditioned, stimulated, and limited by environment and experience. It is not enough, for example, to teach the distribution of the sales dollar. Good training should show what this distribution means to each person. Wherever enough knowledge and experience exist among trainees, the problem-solving type of instruction should be used. Problem solving is best used as a means of applying and organizing learning, but it is also

helpful in presentation and stimulation. Problems are more challenging and more vital than mere recitations or lectures.

6. Present information so that it bears upon practical events. Instructors must trace out pathways, connections, and relations between what they are teaching and what goes on in the lives of the trainees and in the department for which training is being done. The instructor cannot assume that trainees will see relationships or make applications unaided, for the dull employee draws barriers around himself, feeling that the business of sales, research, personnel, or office management is no problem of his. Even the alert employee in modern industry feels surrounded by specialized divisions and departments which seem somewhat foreign and unrelated to him. Although he may sense that their functions bear upon his work slightly, the relationship seems distant. Good teachers must help such trainees to get vicariously into these related areas which affect them, and to see a connection between their own work and that of their associates in different departments. Teachers also must help individuals to break down the compartments, created by specialization, that have isolated them in industry. They must make other departments and other functions meaningful by showing that all work together toward a common end.

Meaningful teaching is the key to rapid and permanent learning.

Self-Activity.—One of the best-known principles of learning is that trainees should be active participants in the learning situation. In other words, people learn to do by doing. This implies that the learner should be a full partner in the acts and thoughts arranged or promoted by the teacher.

Frank A. Butler states the importance of self-activity in learning as follows:

No other principle in directing the learning of pupils is more often violated than this one of self-activity. Teachers often fail to realize that pupils must pay the price for every ability acquired; and, as a result, teaching frequently becomes the process of lifting, carrying, dragging, pulling, shoving, and otherwise assisting pupils along to the end of the course, subject, or term. Teachers do the reading, the explaining, the thinking, the talking, the appreciating, the devising, the planning. The problems are teacher-worked, the reasons are teacher-thought-out, the formulas are teacher-derived, the apparatus is teacher-set-up; the causes are teacher-enumerated, the beautiful is teacher-selected; the wicked is teacher-condemned, the right is teacher-praised; all that pupils do is to remain passive, to listen, to copy, to memorize, and finally to recite or

to write at a stated time what little they can squeeze out of crammed minds.

The concept of education supported by self-activity implies that pupils must earn their own living, that they must develop muscle and bone and mind, that they must work to become strong, that they must think to be thinkers, that they must plan to be planners, that they must reason out causes to understand relations—in short, that what they will become is determined by what they labor to be. No learning of importance ever comes without important activity on the part of the learner. Every important ability demands its proportionate amount of self-activity. Without the price in terms of self-activity, valuable abilities cannot become one's possessions.¹

Experience has proved beyond question that a person must perform any act in which he wishes to become proficient. In the development of motor skills this precept is pretty generally accepted and followed. We do not expect a man to become a good golfer unless he practices and plays the game, nor do we expect a packer to cut a stencil correctly unless he has had instruction which involved active practice in cutting a stencil. In developing understandings and attitudes, however, it is easy to forget the need for activity. We assume, for example, that office and production workers will understand each other and cooperate freely without jealousy or disrespect. If we attempt to provide guidance, it is likely to take the form of a lecture on cooperation or tolerance. Seldom does our training provide active opportunities for a display of cooperation.

We are inclined to limit activity to physical activity and to assume that those who show physical evidence of motion, movement, or action also are fully and truly active mentally and emotionally. This, of course, is not always true. Good teachers therefore provide opportunities for their trainees to be active physically, mentally, and emotionally—opportunities to cooperate, to pity, to sympathize, to exalt, to judge, to evaluate, to compare, to make choices, to observe. One excellent program for doing product training, for example, includes much carefully directed observation of quality, design, texture, color, and labeling. While trainees are observing these details of the product which they and their friends make, they are as truly active as if they were using some of the product for its destined purpose. Teachers miss too many opportunities for making industrial learning active through using, testing, reporting, questioning, interviewing, sketching, handling, and collecting data, and a host of other activities.

¹ F. A. Butler, *The Improvement of Teaching in Secondary Schools*, Chicago, University of Chicago Press, 1939, pp. 64-65.

Some teachers seem to regard themselves as fountains of knowledge which they pour out to the trainee, expecting him to absorb it, to carry it away, and to let it influence his behavior for the rest of his life, without any activity on his part.

Almost everyone has suffered from a poor use of the lecture method, which is extensively employed in colleges and is much too common in high schools. The major objection to the lecture is, as we have already said, that when poorly used it stifles student participation. A poor lecture will kill off activity far more quickly than poorly arranged demonstrations, conferences, or other forms of teaching. Only the most skillful, inventive teacher can make opportunities for learner activity while he himself dominates the class and does most of the talking.

Rules for Making Learning Active.—The following recommendations and generalizations may help to make learning an active process :

1. Many of the devices that make learning meaningful will also help to get trainee activity. These are demonstrations, illustrations, tours, visits, exhibits, conferences, practices, discussions, contests, films, recordings, models, mock-ups, blackboards, and graphs.

2. Principles taught or developed through class discussion should, if possible, be applied. At least the implications of their application should be canvassed. The teacher will ask many such questions as: "If this law is so, what action must we take?" He will pose similar questions constantly, thus stimulating the trainees to mental activity, to think, to compare, to place themselves in various new situations, and to anticipate what conditions and events may follow if they accept the principles involved.

3. One of the keynotes of the Dale Carnegie public speaking course is insistence upon participation and practice. Some of his sessions last four and a half hours, yet maintain interest at a high pitch. The trainee can hardly sit through one of these sessions without experiencing at least a half dozen overt participations, at the same time giving constant attention of the most alert kind. The trainee makes two to four short speeches in an evening, criticizes one or two other speeches, listens to all performances, and selects the best ones by means of a simple voting procedure. He may serve on a committee to heckle speakers, he may be one of three or four persons appointed to stand up when the speaker becomes boring, or he may be asked to blow a whistle whenever a speaker says "er." He may also write a report of the night's affairs, a sort of newsletter, and circulate it to all members of his class. While these efforts to get

activity may seem artificial to the academic mind, they are nevertheless effective. There is never a moment of idleness, for Mr. Carnegie has organized class activity to demand constant and intense participation. Other teachers who want to make learning active should study his example.

4. Instructors should control class participation so that all trainees have opportunities. All teachers are familiar with the student who monopolizes discussion and class attention by seeking opportunities to perform. At the other extreme come those who shrink from public notice. Good teaching encourages activity by all trainees.

5. Good teachers stimulate activity by means of texts, tests, assignments, work sheets, problems, models, and mock-ups. All these, however, must serve a purpose. They lose much if not all their value if they merely provide busy work to occupy the trainee's time, without having a meaning or close relation to previous learning and current need.

6. "Role-playing" is another method of making learning active. When this method is used, one of the trainees plays, for example, the role of a supervisor and the other a worker in a reprimand situation, and an actual reprimand is re-enacted before the class. Dramatic situations, which involve counseling, welcoming a new worker, discharging an inefficient employee, or explaining a new policy, serve as subject matter. Role-playing probably evokes the fullest activity of any teaching device.

7. Trainee activity should not be unduly delayed. In job or skill training, some instructors repeat the whole cycle of operations too many times for the good and usually impatient learner. There is a point at which the learner's interest is highest, at which he is impatient to take hold of the controls, the material, or the machine. This is the time to let him do so, not ten or twenty minutes later.

Purpose.—The third major principle is that there should be established in the minds of the trainees a clear concept of the purpose of the training activity. So closely related are the principles of *meaning* and *purpose* that it is sometimes difficult to separate the two. Learners progress most rapidly when they see a goal, a reason, a purpose for their learning. Some of the simple methods of stimulating trainees to discover purpose are the following:

1. Always let the trainee know where he stands, what progress he is making. Research has proved that learners who are aware of their successes and failures improve more rapidly than those who are not.

2. Tell the trainee *why* he is learning certain things, for this helps him to formulate a goal. The alert teacher always shows the reason and the need for instruction, and thereby either provides goals or helps trainees to do so for themselves. A supervisor recently reported that he could not get his employees to wax the spindles of the machines on which they worked before putting a load upon them. An instructor investigated and found that employees in this department had been told only *what* to do. In departments where spindles were waxed, all the employees had been shown why that operation made their work easier. In this case, those who had discovered a purpose had learned.

3. Refer regularly to the uses to which training can be put. The good teacher shows the value of understanding the union contract, of being able to type accurately at high speed, or of knowing how to answer a telephone properly. He makes these values individual, often by showing the recognition and rewards that may come to those who develop these skills.

Individualized Teaching.—The last major principle is that teaching in industry must be adapted to individual needs. Individualized teaching is especially important because industrial trainees differ widely in age, health, education, special ability, personality, family background, and earnings. Public schools and universities have set up prerequisites, preliminaries, and screens, which tend to produce homogeneous groups. One who has not passed fifth grade geography, for example, is not likely to be found in sixth grade geography.

In contrast to this, the requirements for entering training in industry are loose indeed. Those who have barely heard of the term industrial management may find themselves in classes with others who hold degrees in the subject. The major requirement for enrollment in training seems to be that trainees have need for it. In one typical class in office filing in a company of eight hundred employees, there were three grandmothers, five mothers with families to keep house for, five single women past thirty, and four in their twenties. Three members of the class were university graduates, six had had business college training, five were high school graduates, and three had had incomplete high school training. Among the trainees were a newly hired clerk-typist and an executive secretary who had been with the company for twenty-five years. For this heterogeneous group the training director had to set up one course in filing, even though it would be new material for some and chiefly review for others. For the instructor there was a constant challenge to make

it interesting, stimulating, and profitable for all. This is a difficult situation for the instructor, since the best training generally takes place when the range of interests, age, ability, and experience is not too great.

Another example illustrates the wide range of trainee ability and need. A training director in a paper-making industry was asked to set up refresher training for employees who were taking correspondence courses and were having difficulty with the mathematics involved. When the situation was carefully canvassed, the instructor found that some students required arithmetic and others calculus. The instruction, of course, had to be completely individualized.

Rules for Individualizing Teaching.—There seem to be three principal ways in which training can be individualized in order to meet the widely different needs of the heterogeneous population found in business today.

1. Though he can seldom eliminate it, the trainer should group trainees so as to reduce the range of variation whenever the number of persons to be trained permits or the working conditions allow. The major factors to be considered in grouping are four: ability to learn, work experience, age, and level of authority and status within the organization.

2. Where effective grouping is impossible, efforts should be made within each class to adapt instruction so that it will give opportunities for practice to all trainees, challenging the highly able while, at the same time, assisting and encouraging the slow. A good illustration of individualized group teaching is fire fighting training. In such a course the general material—such as the costs of fires, causes of fires, and methods of prevention—is taught to the group. Following this, trainees individually turn in fire alarms, throw switches to shut off machinery, participate in or direct fire drills, and use fire extinguishers on live fires.

3. When a great deal of individual attention is necessary, it probably is best to abandon the idea of classes and teach each trainee separately. This is frequently done in training supervisors and executives. In one instance, executives were individually helped to set up organization charts for their departments. At the same time, they were instructed informally in the principles of organization. Much supervisory and executive training occurs in this manner, when the training director or immediate supervisor counsels, advises, or illustrates. The skill aspects of shop and trade training are also

individualized. The same holds true for the teaching of unskilled and semiskilled jobs.

These three major plans—grouping homogeneously, individualizing the teaching within the class, and completely individualized, out-of-class instruction—are the primary devices used to fit instruction to the learner. Whichever of the three plans is used, the following suggestions will help in further meeting individual needs:

1. When there is a wide range of ability in any group of trainees, the instructor must plan and direct his questions carefully to meet individual needs. Some trainees will be able to respond to his most difficult problems; others in the same class may not even recognize the existence of the problem. Good instructors, by throwing the most challenging questions to the outstanding students, can stimulate them without embarrassing the others.

2. Training instructors must adopt standards of performance which are neither as strict nor as uniform as those of schoolteachers, whose classes are relatively homogeneous. There is a wide range of ability in any industrial class and the teacher must therefore accept a wide range of response and performance.

3. Training departments can make good use of libraries to satisfy individual needs. Those for whom the training is too shallow may require further study and reference, and should be directed to the training library.

4. Courses in industry are often made to order. Here we encounter another major contrast with public schools, where courses involve large numbers of students and are designed to meet some generalized need, with the same course recurring year after year. In industry, on the other hand, most courses are set up to meet specific needs of small groups. By the very frequency with which they plan and offer new courses, training directors do much to individualize learning.

5. In conclusion, we must consider a danger presented by attempts to individualize instruction. Its complexity and difficulty tempt unskilled teachers to misuse devices such as the free conference method. A teacher who finds it difficult to individualize group teaching can go through the motions of doing so if he relies almost fully upon the free conference method. In doing so, he actually yields control and direction to the whims and fancies of self-assertive trainees. Overreliance upon the free conference as a means of individualizing instruction almost always is the mark of an ineffective, poorly equipped teacher.

Steps in Training

In addition to the four principles of teaching, there are four steps showing the general order in which instruction should proceed. These steps are applicable to training of all kinds, regardless of the type of information or skill being taught or the level of personnel being trained, and are appropriately considered as part of teaching methods.

1. *General information and principles must come first.* Men must know why certain actions produce desired results while others do not. Specific practices, problem solutions, improved techniques, whether they deal with motor learning or social learning, all grow from this basic step.

2. *Knowledge of principles and techniques must be translated into action in a controlled situation.* When a man has learned the principles underlying the operation of an adding machine, a turret lathe, an organization, or a human being, he must have the opportunity to test these principles by putting them into practice. This practice must take place under circumstances sufficiently controlled to permit the immediate correction of errors and the reteaching of principles that have not been thoroughly mastered. It must be, in effect, guided and supervised practice, in some cases taking place in the classroom, in other cases occurring on the job.

3. *The controlled practice situation must give way to the real, uncontrolled situation, but supervision and guidance must continue.* At this point, training leaves the classroom and the laboratory; but just as the mechanic who leaves the vestibule school and goes into the shop is still watched and taught the fine points of his trade, so must any learner continue to receive guidance and instruction when he is on the job. It is the responsibility of both the training department and the immediate supervisor to provide this guidance, often called "follow-up."

4. *Supervision and guidance in the practice of the new ability must gradually be reduced to a minimum to encourage self-development.* At this stage, training takes on the characteristics of individual counseling. The trainee has received his basic formal instruction. This has been followed up on the job with individual, yet formal and planned, instruction given by the department head or supervisor to whom he reports. Now it is assumed that the trainee has mastered the basic principles and their application. There remains the im-

portant responsibility of the continuous development of the individual through encouraging and helping him to discover and to overcome his weaknesses, and to make the most of his strengths.

Like step 3, this is largely the function of the line superior. Again the training supervisor will offer staff assistance if it is requested and may even stimulate such requests, but it is up to the line supervisor to develop his subordinates by thoughtful placement, by making assignments that are varied and challenging and that permit the exercise of initiative and ability, by constant evaluation of the subordinates' performance, and by recommendations for improvement.

Summary

Persons who plan to do industrial teaching should study the characteristics of present-day training which are outlined at the beginning of this chapter. Some of these characteristics have become traditions. Like unconscious drives in personality, they determine, even more than do the scientific principles of learning, what is generally expected of the trainer and how he will perform. The courageous instructor, however, may well attempt to follow the four major principles outlined, namely:

1. Teaching should be meaningful.
2. Teaching should provide for self-activity.
3. Teaching should help the learner to establish clear purposes.
4. Teaching should be adapted to individual needs.

Teachers should check their instruction, or ask fellow-instructors or supervisors to do so in order to determine how well they are following these four basic laws of learning. They are a reference point from which departures into visual aids, conference methods of instruction, master outlines, and other specific devices may be made. They are basic and primary, the foundation of profitable teaching. An understanding and practical application of these four principles is essential to profitable teaching in industry.

CHAPTER 11

SELECTING AND IMPROVING THE TRAINING STAFF

Chapter 4 discussed the importance of good teaching and its relation to profitable results; these results should be manifested in greater employee security, cooperation, teamwork, and good will, all of which are essential to high efficiency. Since good teaching can be secured only by careful selection of qualified teachers, we have stressed the importance of bringing professional instructors into commercial and industrial training. On the other hand, training departments now include hundreds of conscientious and experienced persons who lack formal training in education but have a world of technical and practical experience. Since their services are essential, training must provide in-service programs and individual guidance which will give them the professional knowledge and skills needed for good work.

Traits and Qualifications of Teachers

There are many platitudes, admonitions, and warnings regarding the personality traits that should be looked for in selecting good teachers. There are almost as many lists of these traits as there are writers, and almost as many traits on some of the lists as language provides. Probably the best list for one about to hire an industrial training instructor, or to select one from his own business, is provided by the National Committee on Teacher Examinations of the American Council on Education.¹ The Committee's list of teacher's traits and qualifications is as follows:

- A. *Data Obtainable from Records* (These include all available documents such as medical examination reports, transcripts of college credits, teaching certificates, letters of recommendation, application blanks; and records of achievement, such as publications, citations, etc.): professional preparation; training in teaching fields; integrity of character; age; amount and quality of experience; health and physical fitness; outstanding achievements.

¹ National Committee on Teacher Examinations, *National Teacher Examinations; Suggestions for Their Use in the Selection of Teachers*, New York, 1945, pp. 11-12.

- B. *Data Obtainable from Interviews*: tactfulness; attitude toward educational profession; refinement, manners, and social graces; potentialities for cooperation; leadership qualities; energy and drive; physical appearance, poise, and posture; enthusiasm for teaching; quality of speech and voice; neatness; judgment and perspective in making decisions and choices; ability to express self orally; versatility and special abilities useful to program; courtesy; democratic viewpoint; possession of appropriate sense of humor; ability to control emotions and temper; interest in subject field; sympathetic attitude toward students and others.
- C. *Data Obtainable from Classroom Observation*: foresight in anticipating problems and planning satisfactory solutions; skill in developing interest; effective use of illustrations; patience with learners; skill in developing abilities to apply knowledge to practical situations and to detect its implications; habits of accuracy; skill in holding attention; ability to explain subject matter clearly; resourcefulness in dealing with classroom problems; ability to diagnose needs and adapt instruction to them; ability to maintain good working environment in the classroom; ability to obtain participation in planning and conducting class.
- D. *Data Obtainable from Tests and Examinations*: knowledge of education trends and developments; understanding of psychological development; understanding of the learning process; knowledge of methods and practice of individual and group analysis; knowledge of methods and practice of guidance; knowledge of appropriate principles and procedures in instruction; present understanding of teaching field; knowledge of general cultural materials; knowledge of current affairs; understanding of social problems; reasoning and problem solving ability; comprehension of instructional, administrative, and cultural reading materials; understanding of English language and its proper use; ability to express self in writing.

Importance of Certain Traits.—Training instructors must be exceedingly strong in a few of the traits mentioned on the list above. First, they must possess a high degree of intelligence and adaptability. Industrial teachers are not dealing with children and immature youth, but with critical, free-speaking adults. To meet the widely varying instructional needs of department heads and superintendents, to say nothing of union leaders, technicians, craftsmen, and machine operators who attend industrial classes, a teacher must have a good mind and know how to use it. He must be able to adjust himself easily to

the vernacular and the needs of accountants one day, chemists the next, and engineers the following day. He must be able to make rapid adjustments in vocabulary, thought, and attitude, so that he can deal with the specialist and expert as well as with the immature and the unschooled, since he may find himself teaching vice-presidents or research directors in one class and dishwashers or elevator operators in the next.

Showmanship and dramatic ability are probably more necessary in industrial training than in public school teaching. The typical production worker is not easily interested by a dispassionate, logical, factual presentation, however well it may be organized. He must be aroused by vivid instruction. He must be challenged, stimulated, and sometimes brought out of the mental lethargy that overcomes many industrial workers. This demands spirited, colorful, and compelling presentation, backed by sympathy for and patience with students who have difficulty in responding. The following traits should therefore be possessed in considerable degree by those who plan to succeed in industrial training:

1. High intelligence and adaptability.
2. Ability to use showmanship and drama in lively, imaginative teaching.
3. Patience and sympathy.
4. Enthusiasm for teaching and determination to succeed.

The Teacher's Personality.—Professor Symonds of Teachers College, Columbia University, has emphasized the need for critical study of factors in personality that are related to success in teaching. He maintains that there must be a core of personality which plays its part in making some teachers successful and others unsuccessful. In lieu of decisive studies, Symonds suggests that four factors are essential in any individual who is to succeed as a teacher.

1. Every teacher should like teaching and through it should attain personal goals and satisfaction. The good teacher does not take up teaching under economic pressure or in order to escape from some less desirable form of work or for other superficial reasons.
2. A good teacher should have self-respect, dignity, and courage, as opposed to feelings of inferiority and inadequacy. The personally insecure teacher has difficulty with discipline and either becomes inept and ineffective or must maintain his status by bluff and swagger.
3. A good teacher must be able to identify himself with learners. He must have social awareness and the capacity to enter into the feelings and interests of others, to understand the motives and conflicts of others.

4. The competent teacher is emotionally stable. He is able to accept the aggressions of learners and their laziness, carelessness, slowness, and stupidity, as well as their brightness, industry, and efficiency. He is able to accept competition with his colleagues and the demands and restrictions imposed by the community in which he works.²

Sources of Trained Teachers

The training director, personnel man, or plant manager who needs an industrial teacher may begin by examining his own personnel records to see whether there is in the company some professionally trained teacher who has been challenged by the reality and practicality of industry and has left the schools. If such a person has left because of lack of opportunity and not because he lacks interest in teaching, he probably will become a good instructor. If a candidate is not found in the company, then there should be a search of the local community for an outstanding public school instructor who is not advancing as rapidly as his ability merits. Teacher agencies and business employment agencies in the large cities may provide good contacts, although well qualified men secured through agencies usually command very high salaries. A search for instructors also should not overlook placement agencies of schools and colleges. Professional associations, such as those listed later in this chapter, sometimes can make recommendations.

Executives should not be too discouraged, however, if a wide search reveals only a few candidates for training positions, and if these few possess doubtful qualifications. Until the schools of personnel and industrial relations begin to prepare students specifically for commercial or industrial training, competent teachers are bound to be scarce. In time the many newly organized schools and departments of industrial relations may assume the responsibility of preparing teachers for commerce and industry, or the graduates of the schools now preparing vocational teachers may be given a fuller concept of the social and adaptive skills needed in industry today. The service of these schools to industry would then be valuable indeed. In the meantime business should continue to select the best available teachers, regardless of the subjects in which they have had major preparation. Postemployment induction into commerce or industry and its problems will have to compensate for the lack of desirable college or university preparation for teaching in industry.

² P. A. Symonds, "Evaluation of Teacher Personality," *Teachers College Record*, Nov., 1946.

The subjects which a teacher about to enter industry has actually taught make little difference in his chance for success. Teachers who have specialized in vocational and trade education, for example, seem to do no better than those who have taught English, science, or social studies. In fact, many teachers prepared to instruct in vocational and trade schools are so steeped in trade and skill training, and so resistant to what they consider general or academic nonessentials, that they are ill prepared for the social complexities of modern business.

Major and Related Subject Areas Required of Business and Industrial Teachers

Since no school now supplies industry with fully trained instructors and training directors, a selection must be made from those whose training approximates the requirement. Those should be chosen for positions in the training field whose preparation most nearly meets the major and related requirements discussed below.

The areas of study needed for work in the training field fall into major and related areas or requirements. The major requirements consist of two divisions: (1) Teaching and educational administration, and (2) Human relations, sociology, and psychology. The related requirements—those which can be met after the two major requirements are satisfied—include general knowledge of or familiarity with functions and disciplines found in business and industry. The major and minor requirements are outlined in the list below:

<i>Major Areas or Requirements</i>	<i>Related Areas or Requirements</i>
1. Teaching and Educational Administration	1. Industrial or Business Organization
2. Human Relations, Psychology, Sociology	2. Administration, Supervision, Foremanship, Management
	3. Labor Laws, Labor History, Negotiations, Contracts, Grievances
	4. Industrial Engineering, Business Administration, Office Management
	5. Costs
	6. Trades and Occupations
	7. Personnel Administration
	8. Technical Field Represented by the Industry—Rubber, Steel, Insurance, Textiles, Merchandising, etc.

The Two Major Requirements for Teachers.—The first and most essential qualification for an industrial teacher is training in teaching, evidenced by a degree in education or at least by courses in teaching methods, curriculum construction, educational administration, psychology of learning, and job or trade analysis. The second basic requirement of a good teacher is a working knowledge of human relations. Progressive industry's increasing emphasis on the social and psychological needs of employees makes it essential for training specialists to understand these needs, to know how to satisfy them and, most important of all, to know how to teach others to provide that satisfaction. Formal training in general and social psychology, industrial sociology, and human motivation is needed to provide this knowledge of human relations. After preparation in these two major areas, education and human relations, there are many other related fields that training men can profitably study.

Related Requirements.—The relative importance given to the various related areas will vary from plant to plant, and even from job to job within one training department. Always the training specialist should be well grounded in the first two related areas—the principles of organization and of administration. The need for knowledge and training in these areas exists throughout industry. Far too many training men know less about these fields than do some of the supervisors and managers whom they are employed to improve.

For an in-service teacher or for a student preparing himself for the field, it is probably best to aim for a general orientation in all related fields, and then to specialize in those fields which seem most helpful in the type of business in which he is employed or intends to seek employment. It is obviously impossible to become specialized in all branches, but it is not impossible to get a general knowledge of the most important related areas and a specialized knowledge of one or two. Attaining the full goal may take years, but the teacher who first familiarizes himself with teaching and educational administration and with human relations, and with some of the related areas thereafter, is best prepared to do effective commercial or industrial training.

The major and related areas identified above can serve as a list of requirements to those selecting training men for industry. This list can be used to guide schools and colleges in preparing such men for business, to suggest special courses in near-by universities for those in service, and to suggest fields of reading and study for those undertaking self-improvement.

In-Service Training for Teachers

Self-Help Readings.—Many men have more than compensated for their lack of formal education through experience and self-guided reading. For these and for professionally trained men interested in further improvement, a list of selected references for industrial trainers is provided on pages 271-273. This list can serve equally well as the basis for an industrial training library. A few outstanding titles have been marked with an asterisk.

Professional Societies and Conferences.—Many organizations conduct regular programs and conferences on management problems, frequently dealing with subjects directly in the field of training. Thus, one three-day convention of the American Society of Training Directors presented speakers from major industries and well-known schools in discussions of such topics as: industrial tests and techniques, presupervisory training, team training, supervisory training, college and university assistance to the training director, office supervisory training, conference leader training, why an organization for training directors, executive development and training, relationship of editor of house organ to training director, place of the training director in the industrial organization, and labor's attitude toward industrial training.

Modern managements find it a good investment of money and time to send their training men to meetings of some of or all these organizations, where they can share experiences, learn new methods, and secure professional criticism. Details regarding conferences, publications, and membership privileges may be had by writing to the following professional societies:

- American Management Association, New York.
- American Society of Mechanical Engineers, New York.
- American Society of Training Directors, Detroit.
- American Vocational Association, Washington.
- National Industrial Conference Board, New York.
- National Office Management Association, Philadelphia.
- Society for the Advancement of Management, New York.

College and University Study.—Schools of education offer evening and Saturday classes suitable for refresher and upgrade training of professional men already teaching in industry, as well as for initial training of nonprofessional men in service. The courses listed

below are of considerable value and are usually available in teachers' colleges or schools of education.

Initial training for in-service, nonprofessional training men, or for students preparing to enter the field may include these courses:

1. Methods of Teaching
2. Psychology of Learning
3. Curriculum Construction
4. Job Analysis
5. Psychology of Individual Differences
6. Tests and Measurements
7. Social Psychology
8. Human Relations or Human Motivation

Refresher and upgrade training for professional teachers may include these courses:

1. Advanced Educational Psychology
2. Methods of Industrial Teaching
3. Educational Sociology
4. Social Psychology
5. Industrial Psychology
6. Counseling and Vocational Guidance
7. Supervision of Instruction
8. Educational Administration
9. Visual Aids
10. Social Aspects of Industry
11. Adult Education

In-Service Self-Help.—Any group of a dozen or so training men within one large company, or from several small companies within the area, can easily arrange a series of refresher meetings designed to improve their own skills. If there is a college or university near by, it probably can furnish a few qualified instructors and the group can also assign topics to its own members for investigation, presentation, and discussion.

Many desirable topics can be investigated profitably by such a group. A program of this type might include meetings on some of the following topics: needed research in industrial training, the use of visual aids, a critical evaluation of films for supervisor or trade training, the relationship of selection to training, use of achievement tests in industrial training, selection of instructors, training department publicity, selling top management on training, preparation and

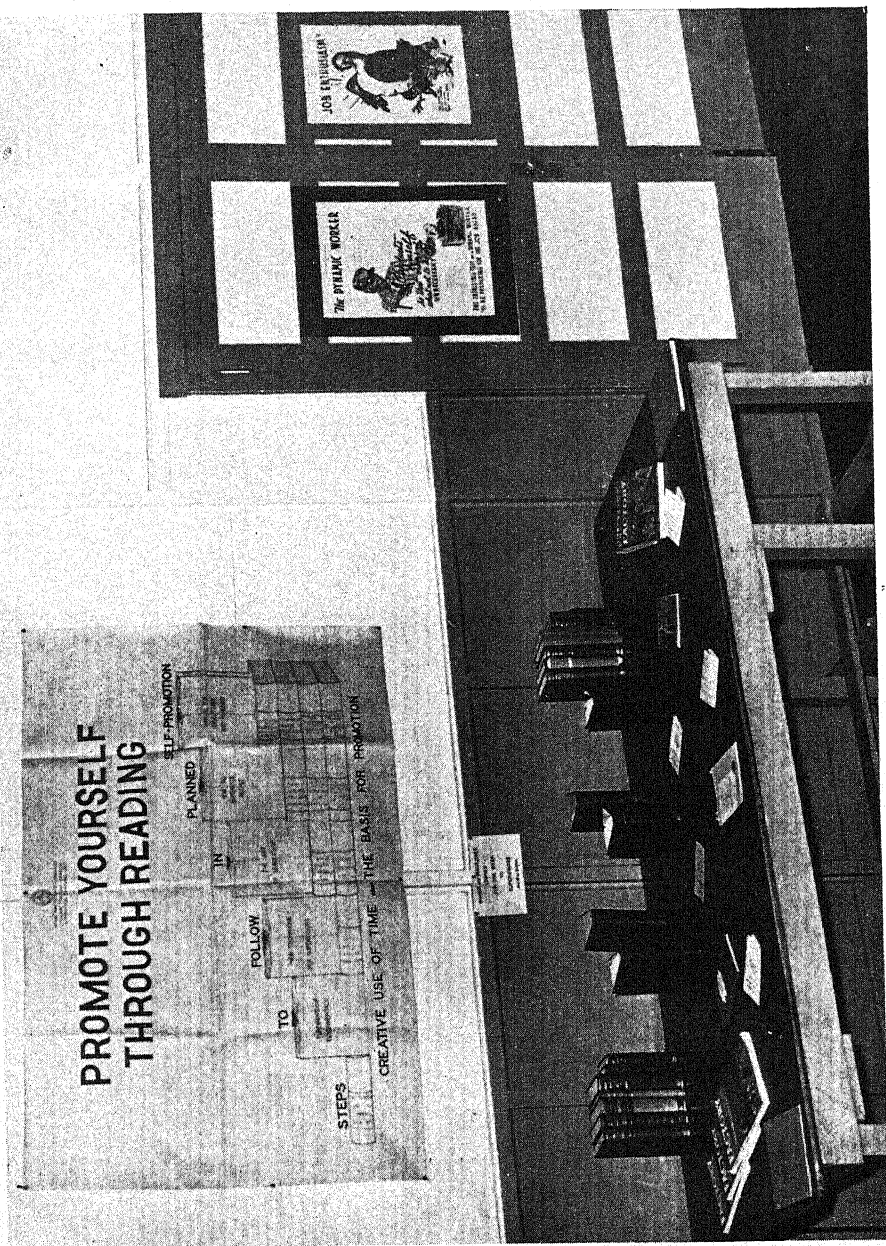
use of learning curves in semiskilled jobs, when to use the conference method in training, how to arrive at teaching objectives, and performance standards for instructors and training directors.

Staff Meetings.—Regular staff meetings can be held to advantage by training departments which have four or five instructors. Each meeting may deal with a selected subject or problem and should begin with a general presentation serving as a basis for development of the subject and its application to the local situation. For example, a training department about to make a film for teaching housekeeping can profitably devote a staff meeting to discussing the script, the shots to be taken, and the plans for getting the job done. In such a meeting, previous work can be reviewed and past failures thereby avoided. Staff meetings can be used to develop plans for new training, to determine the objectives of such training, and to select subject matter to be used in meeting the objectives. Well-planned and strongly directed staff meetings are probably more valuable for developing instructors than any other single activity. It is in the staff meeting that the instructor has the opportunity to present his opinions and plans, and to support or amend them in view of his colleagues' constructive criticism.

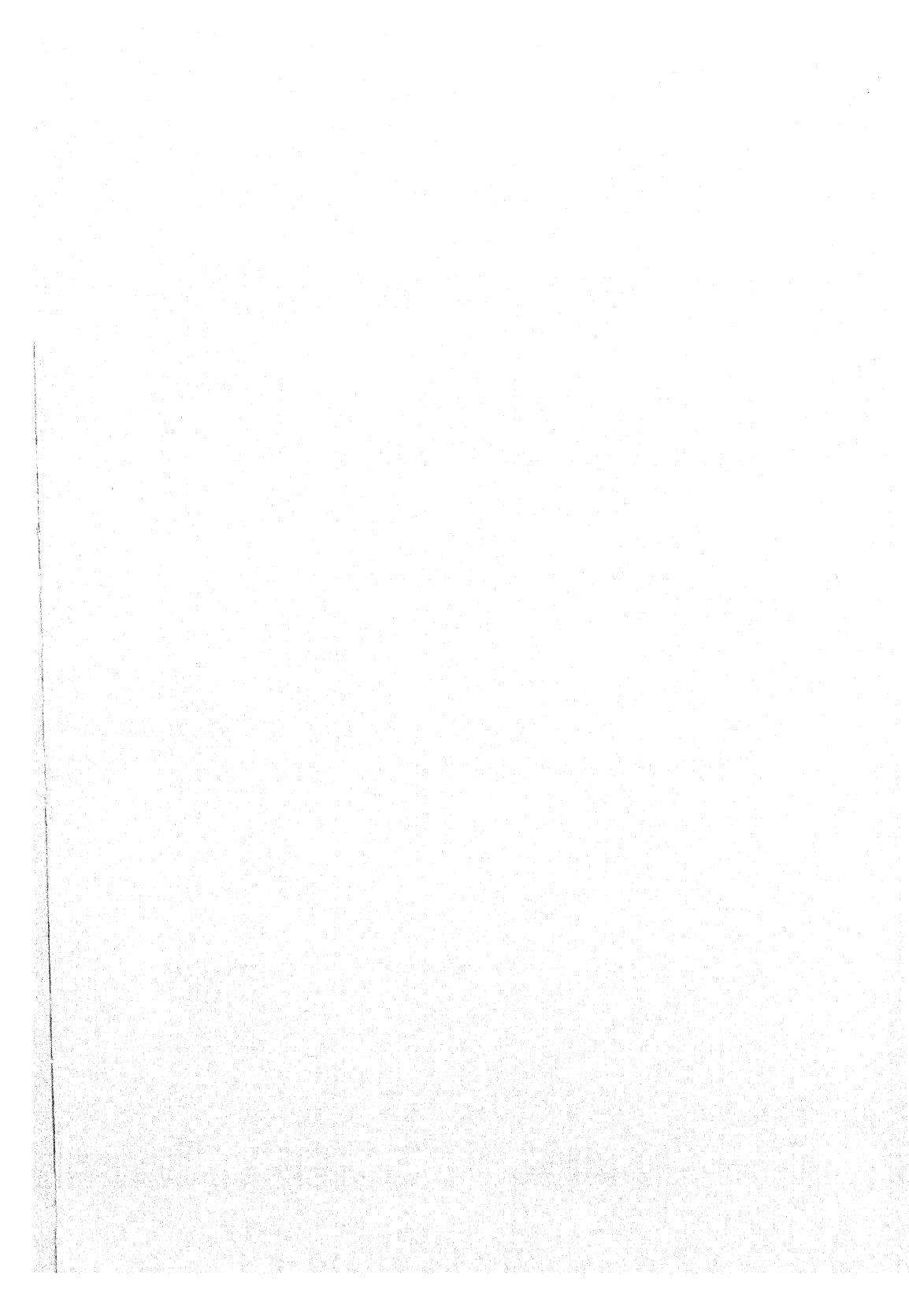
Exchange of Teaching Materials.—To develop teaching materials for the varied and technical units that are included in most programs is a heavy burden to place on any training department. This load is made necessary by the absence of any organization or office designed to circulate teaching aids.

Although there is no lack of ready-made training aids for sale at fancy prices, we have no central office to pool and circulate the teaching materials already developed by training departments. As a result, vast amounts of time and a great deal of money are spent in creating visual aids, conference outlines, course outlines, job sheets, problems, and case studies, which either duplicate those already prepared elsewhere or could easily have been adapted from existing materials.

This, of course, is an undesirable waste, one that adds to the cost of training and reduces its efficiency. In the absence of a general circulating agency, training directors will do well to exchange materials with their neighbors or with members of their own professional societies. This not only will reduce duplication; if sufficiently successful, it may lead some society or school of education or labor relations to collect, catalog, and make available on a loan basis the most broadly useful of these excellent teaching materials.



Form 9. Training Department Library



Supervision, Evaluation, and Rating of Teaching

As we have already said, professional instructors are accustomed to supervision, and most of them welcome it. The training director usually renders this service for his staff, but in some departments instructors arrange to visit each others' classes, where they observe teaching and, following the sessions, counsel each other informally on good and bad points. There are many rating scales designed to help a training director to discover teaching strengths and weaknesses. The following rating scale is used in some plants for evaluating the teaching.

CHECK LIST FOR EVALUATING CONFERENCE LEADER'S PERFORMANCE

Directions for Use by Personnel Director or Training Supervisor: It is not necessary to check every item. Some may not apply or a single visit to the classroom may not yield sufficient evidence to justify a rating. Note that there are five numerical ratings, ranging from inferior to excellent. In using this list put a circle around the number on the scale at the right which best represents your opinion of the leader's performance.

Scale of Ratings

- 5—Excellent—equal to or better than the best teaching performance you have ever seen in this training department.
- 4—Good—better than average, better than most performances in this program.
- 3—Average—acceptable, not unusual; equal to the usual performance of instructors in this program.
- 2—Poor—needs improvement; not as successful as you have observed in the majority of cases here.
- 1—Inferior—needs immediate attention; program will be harmed by continued performance like this.

Evaluation of Conference Material

- 1. Had the leader prepared his conference outline in advance?
Did the leader adhere closely enough to the main points of the outline? 1 2 3 4 5
- 2. Were the basic principles or techniques built up and reinforced with a wealth of interesting examples, anecdotes, and explanations, drawn where possible from the conference members? 1 2 3 4 5
- 3. Did the leader isolate the basic facts or principles and see that the group understood them? Were the main points emphasized, not lost in minor detail? 1 2 3 4 5
- 4. Did the leader try to get the group to agree upon the soundness of the ideas presented in the conference? Did the group accept the teaching? 1 2 3 4 5

5. Were actual problems elicited from the group? Did the leader endeavor to apply his principles to actual cases presented in the conference? 1 2 3 4 5
6. Was there a quick grasp of the ideas offered by the group and advantageous adaptation of them toward reinforcing the material presented by the leader and by other conference members? 1 2 3 4 5
7. Did the instructor treat the teaching material with respect? Did he have confidence in what he was teaching? Did he evidence belief in what he taught? 1 2 3 4 5
8. Was there evidence of the leader's recent reading, research, or observation in preparation for the conference? 1 2 3 4 5
9. Was there proper allotment of time so that points of major importance were treated adequately? 1 2 3 4 5

Evaluation of Participation

1. Were the instructor's questions important, specific, sequential, and thought-provoking? 1 2 3 4 5
2. Did he attempt to draw, and succeed in drawing, ideas from the group or did he make assertions too freely? 1 2 3 4 5
3. Did he effectively improve or adapt irrelevant contributions or settlement or discussion? 1 2 3 4 5
4. Did the leader unnecessarily dominate discussion? Was participation well distributed? Did the leader try to draw out those who were not participating? Did he prevent monopoly of the discussion by a few persons? 1 2 3 4 5

Evaluation of Leadership

1. Did the leader periodically crystallize and summarize the thinking of the group? 1 2 3 4 5
2. Did the leader keep the group from straying off the topic? 1 2 3 4 5
3. Did he tactfully improve or adapt irrelevant contributions or superficial thinking? 1 2 3 4 5
4. If any difficult situation arose, was the leader's handling of it satisfactory to the group? 1 2 3 4 5
5. Was the conference room in order? Were charts neatly posted, boards clean, place cards ready, ventilation and lighting attended to? 1 2 3 4 5
6. Did the leader show that he knew the value of visual aids and did he use the board and charts to best advantage? 1 2 3 4 5
7. Did the conference begin and end on time? 1 2 3 4 5
8. Did he have the confidence of the group? Did they seem to like and respect him? Was he one of them? 1 2 3 4 5
9. Was the leader enthusiastic, original, humorous, or otherwise able to stimulate interest? 1 2 3 4 5
10. Did the leader give evidence of understanding the laws of learning and of following accepted principles of teaching? 1 2 3 4 5
11. Did the leader maintain control of the group, eliminate unrelated conversation, allow only one speaker at a time? 1 2 3 4 5

12. Did the conference leader show, in this conference, evidence of having improved weaknesses previously pointed out in his performance?

1 2 3 4 5

What was commendable, outstanding, or unusually effective in the work of the leader observed?

What constructive suggestions for improvement can you offer?

This evaluation form can be used most effectively by someone familiar with good teaching techniques—namely, a training supervisor, another teacher, a competent personnel director, or a professor from a near-by school of education.

When there is only one training man in the plant, he must rely upon suggestions and hints from his trainees and from his superiors to help in evaluation. One training director uses a mimeographed form similar to the one reproduced below in order to get trainee evaluation of all training courses. He sends these forms through the plant mail service; they are filled out anonymously and returned by trainees who make excellent suggestions for improvement of the teaching and the content.

TRAINING DEPARTMENT

EVALUATION OF ORIENTATION SESSION

The training department wants to know the value of the orientation session which you attended during your first day here and wishes to find ways of making it more useful. Will you kindly answer the questions by checking yes or no? If you wish to make any comments, please write them directly under the question.

Please return this questionnaire unsigned, directly to the training department, or to your supervisor, who will return it for you.

1. Do you feel that the orientation session already has enabled you to know more about the company than you knew about the previous company for which you worked?

Yes _____

No _____

2. Do you think too much information was presented at one time?

Yes _____

No _____

3. Would you like to come back to the training department to review the information presented on your first day here, and to discuss additional policies and services?

Yes_____

No_____

4. Would a visit to other manufacturing departments give you a better understanding of this company?

Yes_____

No_____

5. Do you recommend that we continue orientation for all newly hired employees?

Yes_____

No_____

6. Please make a few suggestions that will help improve our methods of teaching in these sessions. Explain what you liked and what you disliked.
7. Place an *x* before the subjects which you feel should have been explained more thoroughly. *Underline* the subjects which you found least helpful.

History of the Company
Company Products
Company Organization
Absent and Late Rules
Hours of Work and Overtime
Pay Deductions
Insurance Benefits
Safety

Rules and Regulations
Suggestion System
Employee's Responsibility
Company's Responsibility
Credit Union
Recreational Activities
Vacation and Holidays
Union Contract

8. What other subjects should we have covered that would have helped you?
-

Another device that a training man working alone may use is to call in a fellow-director from a near-by plant to evaluate his work or to ask an educator from some near-by school or college to sit in occasionally and then criticize. It should be realized clearly, however, that although such questionnaires and criticisms provide useful evaluations they still lack the objectivity of actual research.

Research and Evaluation.—Commercial and industrial training men lack convincing, scientific proof of the value of many of their activities and methods. What, for example, is the effectiveness of motion pictures as compared with conferences, demonstrations, or lectures? What is the best length for a class period? What results are achieved by tests? What prerequisites should be set for admission to certain classes?

These are typical questions for which answers can be secured through controlled experiments. When the training staff itself conducts such research, there is a triple value: it provides much needed

information, it teaches instructors to be critical, and it gives them standing in their profession.

Summary

Good industrial teachers are a product of native inclination and training. The check lists of desirable teacher traits and training presented at the beginning of this chapter will be helpful in the selection of those who have appropriate native equipment and professional training for teaching. The self-help devices discussed in the latter part of the chapter will improve both newly selected and in-service instructors. Training men must assume responsibility for their own improvement no less fully, willingly, and intelligently than they assume responsibility for the improvement of others.

CHAPTER 12

ORIENTATION TRAINING

Orientation is the planned and guided adjustment of the employee to his company and his job. The aim of orientation is the complete and continuous adjustment of the employee to everything that bears on employee-company relationship.

An orientation program, sometimes called an "indoctrination" or "induction" program, assumes that adjustment is necessary in two respects. First, there must be adaptation to facts as they are; for example, a new employee must learn, appreciate, and follow the company rules and regulations. Second, there must be continuous employee adaptation to an ever-changing world, company, and job; for example, an established employee must learn and appreciate a newly changed company personnel policy. Effective orientation thus deals not only with initial adjustment, but also with continuous adjustment to new and different situations. The continuous aspect of orientation is treated in Chapter 18.

The Specific Objectives of Orientation

If the general orientation program is to be successful, many specific objectives must first be accomplished. The specific objectives of orientation, toward which all companies should strive, include the following :

1. A knowledge of company and department rules and regulations.
2. A knowledge and appreciation of and a desire to use company services.
3. A knowledge of what the company is, what the company does, and the importance of the company's product.
4. A knowledge and feeling of the place and importance of the individual worker in the company.
5. A feeling of being at home, a friendly feeling toward the boss and fellow-workers.
6. A feeling that the worker can expect fair and impartial treatment.
7. A feeling of confidence and pride in the company.
8. A feeling of freedom to ask questions, to criticize ; the elimination of suppressed antagonisms and hostility toward the company.

9. An attitude of personal responsibility for the individual job, product, and company.
10. A belief in the interdependence of employee and employer.
11. A feeling of responsibility for waste and cost.
12. An appreciation of the necessity for regular work attendance.
13. A knowledge and practice of safety and health rules.
14. A knowledge and appreciation of pay deductions, insurance, etc.
15. A knowledge of local company lines of authority.
16. A knowledge of where to get personal, social, and job needs satisfied, and the feeling of freedom to do this.
17. An understanding of the problems of the company and a realization that everyone is expected to help solve them.
18. A feeling that the head office and the immediate supervisor are O. K.
19. A feeling that management respects the personal liberties of each employee.
20. A positive, constructive attitude in all job relations.
21. An early mastery of the job skill involved.
22. Little possibility of unjustified discharge; satisfaction with the job and its possibility for permanence.

Like all social goals, these twenty-two objectives overlap, are general in nature, and can be approached from several points of view. Objective 9, for example, involves a feeling of responsibility. This is the type of objective which is most difficult if not impossible to attain when the correct relationship does not exist between the worker and his supervisor, or between the supervisor and management. A definite contribution to attainment of this objective can be made by such orientation vehicles as newsletters and formal classes. Moreover, the supervisor himself, if he is properly trained, can contribute to increasing the employees' feeling of responsibility and belonging. Orientation should attack all these objectives directly and indirectly, by organizing and systematizing the attack from all angles, even from angles over which it has no direct administrative control.

The Importance of Attitude-Building Objectives

The twenty-two specific objectives of orientation fall into three general types:

1. Those objectives dealing with knowledge of facts, such as company rules, insurance, and the products of the company.

2. Those objectives dealing with attitude or feeling, such as the feeling of confidence in the company, pride in the product, and company respect for old employees.
3. Those objectives dealing with skills, such as the skills involved in safe working habits and quality production.

The traditional orientation program has dealt almost exclusively with facts and skills. Only recently has recognition been given to the importance of deliberately and scientifically creating a given attitude and feeling. The realization of its vast significance is thought to be the reason for the attention now being given to orientation programs. Industries have asked themselves, "What is the major hindrance to the perfect 'fit' of employee to company? What is the obstacle preventing quick and permanent efficiency and cooperation gained through mutual respect and confidence?" As a result, industries have begun to realize that the major problem is that of attitude, not lack of skills, in industrial relations today.

Surveys of worker opinion support this belief. The worker generally feels that if industry and business get what they want, he will be left holding the bag. Therefore, he feels that he must go elsewhere for security, understanding, and appreciation. Considerable evidence shows that many employees cling to this feeling in the face of facts to the contrary and, in some cases, to the detriment of programs aimed directly and wholly at their welfare.

Although this reluctance of the employee to accept the company and its avowed purposes is sometimes justified, the intentions of industry and business today are generally more commendable than the worker and certain sections of the public believe. Looked at from one view, this feeling of distrust and skepticism is natural; it is the tardy response of the working public to the stimulus of management misdeeds decades ago. As a result, many conscientious managements are caught in the strong tide of the feelings of today, even though the feelings are not of their making.

Robert W. Johnson stated in an address before the American Management Association: "We stand convicted at the bar of public opinion. The verdict deals with crimes in the field of human engineering. In the mind of the man in the street, management is condemned straight across the board." Claude Robinson, specialist in public opinion, told the Association of National Advertisers: "Failure to sell leadership will put management out of business just as surely as failure to sell goods."

The facts of today indicate that attitude building should be the primary objective of orientation training. Emphasis should be given to those orientation objectives which deal with mutual appreciation, the spirit of belonging and togetherness, the feeling of confidence and security. Knowledge and skills are secondary ends in orientation, and should be stressed only when they form the logical context in which to build the desired attitudes.

Can Attitudes Be Developed?—Up to this point we have assumed that attitudes are subject to analysis, development, and control. The possibility of their control is a fact of social science that does not seem to be fully realized today. Misunderstanding comes especially with relation to the techniques and procedure of attitude development. In this respect, the science of attitude building, in its application within business and industry in America, is young and hesitant.

Some industries seem to have seized upon the possibility of influencing attitudes without, at the same time, becoming aware of conditions necessary to attitude guidance. It has been concluded by some that there exists a magic formula of words or psychological manipulation which over night will turn a rebellious body of workers into a contented flock of sheep. Here two fundamental conditions of attitude building are overlooked: (1) it is a slowly developing, long-time job, and (2) there *must be a basis in fact* for the attitude one is attempting to build.

Those industries hoping to force acceptance of substandard wages and working conditions cannot expect any real, permanent assistance from a propaganda or attitude-building program. At best, such a program can only delay the day of reckoning. But for the industry or business innocently caught in the backwash of public and worker mistrust, there is real hope of success. For a person or industry can expect success in proclaiming its virtues only if it is done modestly, tactfully, professionally, and if there is a basis in fact for self-praise.¹

The Vehicles of Orientation

So far, we have dealt with aims and objectives. It is appropriate now to think of the vehicles to carry out these objectives.

Traditionally, orientation has been thought of in terms of one vehicle—the formal orientation class for new employees. We have

¹ Further elaboration of the conditions necessary to attitude control may be found in Chapter 18.

only to think back to the objectives of orientation to see that this one little vehicle is too small and too weak to carry the entire load. It certainly has an important place, but it functions best when supplemented by other informal training procedures. Other orientation vehicles used in industry will now be described and discussed.

Employment Office.—Like the impressions in the early, formative period of childhood, the first impressions of the worker in the employment office are of vast importance. If the worker has difficulty in finding the employment office, if he has to wait hours before being interviewed, if a preliminary interviewer or receptionist is unfriendly and tactless, he may form a bad impression of the company even before he is hired.

The employment office should make every contribution it can to the objectives of orientation. It should cooperate with the training department in planning both formal and informal orientation activities. In some industries there is a gap between the time of employment and the first meeting of the orientation class for new employees. Where this occurs there should be a thorough understanding as to what stopgap information should be given to the employee by personnel of the employment office, to tide him over until the time of formal instruction. For this purpose a check list of orientation activities to be carried out by the employment office is helpful.

Supervisors.—Within any department where an employee is working there are at least two fundamentally important orientation vehicles: (1) the supervisor or foreman, and (2) the group leader or trainer. It is a principle of human relations that the foreman or supervisor has a unique and strategic position for improving the attitudes of workers. Excellent work done by means of other vehicles can be canceled at one stroke by the supervisor. Although much has been written and said about how the supervisor should treat new employees and how he should exercise his leadership responsibility with relation to experienced employees, not enough has been said about the responsibility and methods of the supervisor in creating and maintaining desirable attitudes and appreciation. As a whole, supervisors are not conscious of this as a major responsibility for which they are held accountable in the same way that they are held accountable for production. It is therefore the responsibility of those who are in charge of orientation to see that supervisors understand and truly value the attitude and appreciation goals, and that they apply proportionate time and effort to attain these goals.

In some industrial plants the supervisor is unaware of or indifferent to the nature and the extent of the information and guidance his workers are given by other persons; consequently, he does not know what information and guidance remain his responsibility. In many cases such vital information as the method of reporting absences, pay deductions, insurance, holidays, and even pay policy itself remain matters upon which workers are ignorant because all responsible parties assume that someone else is giving the information. Recognizing the importance of total coverage of essential facts concerning the company, some companies have developed a three-part check list, with the employment office, the training department, and the supervisor working as a team. This assures that no important items will be omitted and, in addition, provides for deliberate duplication of effort on difficult points.

There is a growing realization of the significant role that older employees can play, especially with regard to attitude formation. A job trainer, a group leader, a gang leader, a straw boss, or a ranking secretary, all have the opportunity to shape the attitudes of new employees and lower-bracket regular employees, but they too must be oriented and made conscious of the role they should play. Some companies have had marked success with top employees after a few small group meetings which emphasized their positions of responsibility and requested their assistance in guiding and helping the other employees.

Handbooks.—Although a fundamental tool of orientation, handbooks can do more harm than good if too much is expected of them. The handbook alone certainly cannot be relied upon to do much real and permanent attitude building. Many argue that it cannot even be relied upon to cover important facts about the company, since workers seldom read handbooks completely and carefully. A handbook should therefore be a reference book for facts which are covered by various other orientation vehicles.

Employee Magazines.—This orientation vehicle, one of the most important in attitude building, can help to fulfill all the orientation objectives for both new and old employees. It has, however, the faults common to all printed material: it may not be read, and, if it is read, it may not be understood; moreover, it cannot deal as personally, intimately, and directly with attitudes as an alert, personable teacher can. For these reasons it, like the company handbook, should be relied upon only as a supplement to group instruction, personal contact, and follow-up.

The Orientation Class.—This vehicle is fundamental in orientation training. Subjects discussed in orientation classes include company rules and regulations, company policies, products, and services. This type of training should be given as soon as possible after the employee is hired. In many large companies several orientation classes are held daily. In smaller companies meetings are held weekly or at longer intervals to orient employees hired the week before. It is not advisable to have more than ten or fifteen employees in an orientation class. Most companies having orientation classes keep new employees in conference until orientation is completed, usually half a day. Other companies instruct new workers one hour daily or one hour weekly, until the beginner's orientation is completed.

Orientation Program Illustrated.—Presented below is a teacher's outline for a formal orientation class. This orientation should be given on the first morning that a new employee reports to work. Classes should be small, consisting of two or three employees, never more than ten. Teaching should be informal, intimate, and conversational.

ORIENTATION TRAINING

Welcome and get acquainted with new employees. Put them at ease. Conduct discussion according to the following outline:

1. Purpose of Orientation:
 - (a) To familiarize new employees with the company.
 - (b) To avoid the confusion that a new employee may face when going into a new job.
 - (c) To give employees an opportunity to ask questions about their new jobs.
 - (d) To save employees' time and effort by telling them where to go for information or help in the solution of problems that may arise.
 - (e) To explain company rules and regulations so that new employees may avoid embarrassment or disciplinary action that would result from violation of rules about which they have no knowledge.
 - (f) To let new employees know that they are an important part of the organization.
2. What Is the Company?
 - (a) Brief history leading up to present size.
 - (1) A world-wide organization. Describe the main plant and the subsidiaries. Use world map showing plant locations.
 - (2) Distribute the *Employees Handbook*.

- (b) Variety of products: Display an exhibit which shows old and current products.
 - (c) Department organization: Use large permanent wall chart to explain the organization of the company and the lines of authority. Place emphasis on the employee's department. Use photographs of employees' supervisors to supplement the organization chart.
3. General Information:
- (a) Absence and lateness.
 - (b) Regular working hours and overtime.
 - (c) Provision of uniforms.
 - (d) Pay deductions: Social security, state unemployment insurance.
 - (e) Bulletin boards: The place chosen for announcements, information, government regulations, union notices, etc.
 - (f) Telephone calls: Calls of an emergency nature will be relayed to employees; urgent outside calls may be made by obtaining the supervisor's permission.
 - (g) Safety: Distribute *On Duty*, a safety booklet, which illustrates and explains helpful suggestions for accident prevention. Comment on accident and fire prevention. Urge employees to report immediately to the supervisor and to the nurse all minor cuts and accidents. Use a fire alarm box to demonstrate the correct way of reporting a fire.
4. Rules and Regulations: Distribute and discuss rules. Try to get understanding and acceptance.
5. Employees' Responsibilities: Ask the employee to list what he would expect from a new employee if he were the employer. Interest in the betterment of products, improvement of methods and working conditions, performance of a full day's work, proper regard for cleanliness, knowledge of company rules and regulations, elimination of waste, and cooperation are among those usually suggested by the new employees. Discuss each point.
6. Advantages of Working for the Company (The discussion leader should solicit discussion of management's responsibility, from which it will usually be possible to bring out some of the following facts):
- (a) Security.
 - (b) Safe, clean, and orderly working conditions.
 - (c) Organized system for suggestions.
 - (d) The Credit Union: An organization which encourages saving and gives financial aid to those who request it.
 - (e) Insurance: Kind and amount.

- (f) Pensions and separation pay.
 - (g) Paid holidays.
 - (h) Vacations.
 - (i) Athletic association: Show actual photographs of participation in the sports mentioned.
 - (j) Company store.
 - (k) Social activities and clubs: Show photographs of parties, club activities, and dances.
 - (l) Medical services.
 - (m) Opportunities for advancement.
7. Distribute *Industrial Credo* to illustrate management's view of its responsibility to employees.

The orientation program presented above should be followed, after the employee reports for work, by a carefully planned departmental induction handled by the supervisor or department head. He should previously have been trained and assisted in the matter by the training department. After this on-the-job induction the new employee should be assigned to a carefully selected and well-trained instructor who will teach him the details of his work.

The Orientation Teacher

Great care must be exercised in selecting a teacher for orientation. In addition to being technically a good instructor, the teacher should be friendly, warm, and gracious. He should attract new people and win the employee's confidence easily. An acceptable and winning personality is even more important here than elsewhere in training. Since this is the employee's initial contact, his attitude toward the company in his first hours on the job will be determined to a large degree by his reaction to the orientation instructor.

In selecting a person for this work, the training director should ask which of several candidates is most fully and freely accepted by people, usually at first meeting. An orientation teacher, of course, needs much more than this, but a friendly approach is essential. Orientation training, which requires many of the qualities of a good receptionist, frequently is performed by a woman, usually a capable secretary in the training department or personnel office.

The orientation instructor should remember that an overformalized and memorized approach leads to a routine, repetitive performance. This danger should be avoided. Orientation requires originality, spontaneity, and enthusiasm. A routine approach is no

more effective than a handbook or other written material, and will surely not accomplish the great results that can be expected from an informal and individualized presentation.

Classroom orientation of new or experienced employees is a selling job, but it should not be high-pressured or forced. It can be colorful, interesting, and enthusiastic; but it must be delicate, subtle, and sometimes indirect. It must not be autocratic or dogmatic, for anything which is offensive to the employee may negate all the expected results. An orientation teacher, therefore, must recognize whether or not his presentation is acceptable to his trainees, and he must adjust his program skillfully to make certain that his points are effectively made.

Summary

Orientation training is the planned and guided adjustment of the employee to his company and his job. When successfully undertaken, it goes far toward arresting turnover, absenteeism, worker disinterest, and unjustified dissatisfaction with the job and the company. Orientation as described herein is a ubiquitous program. It is never completed and it is always in process. It is more an aim than a specific type of training. Although it is sometimes performed in classes and sometimes in activities developed for the specific purpose, it permeates and overlaps every other type of training discussed. In fact, all training may be considered a form of orientation.

Orientation training is practiced wherever managements realize that attitudes must be guided or directed no less deliberately than are the more material aspects of the business. Many managements are coming to realize along with Peter Drucker that "mass production is not fundamentally a mechanical principle but a principle of social organization. It does not coordinate machines or the flow of parts; it organizes men and their work."² Drucker claims that only manual skill is eliminated or reduced in modern industries, while the need for "social skill and social understanding" is increased. Orientation provides the knowledge and information upon which social skill and understanding can be based.

SUGGESTED REFERENCES

- "Orientation Training Today," Earl Planty, *Personnel Journal*, June, 1944.
Sharing Information With Employees, Alexander R. Heron, Stanford University Press, 1942, 204 pp.

² Peter F. Drucker, "Henry Ford: Success or Failure," *Harper's Magazine*, July, 1947.

CHAPTER 13

AIMS AND OBJECTIVES OF PRESUPERVISOR, SUPERVISOR, AND EXECUTIVE TRAINING

Functions of the Supervisor

Before we can discuss intelligently the aims, subject matter, and methods of supervisor training, we must examine the supervisor's job and determine his functions, both general and specific. In detail, of course, these will vary with each type of business and even from company to company. Essentially, however, the functions of the supervisor are the same regardless of product or plant, regardless of the level on which he may be employed or how many people he may supervise.

The *general* function of the supervisor is to promote the integration of workers, machines, materials, and time, so that a given job can be accomplished efficiently and economically. It matters not one iota whether the job is that of constructing a power dam or washing windows, of selling neckties or insurance, of turning out a product that may range from an exit interview to a cost statement, a news release, a manicure, or a mortgage. In one form of production, as in all others, the supervisor is the person who must coordinate physical materials and intangible forces to get the job done on time and according to specifications.

Within this over-all function are many specific ones. The supervisor must exercise a firm control over quality and cost so that standards for both are met. He must see to the continuous, efficient operation of machines or other equipment his job may involve. He must plan and control the work of his unit so that schedules are met and the operations of the entire organization are facilitated. He must direct the men and women working under his supervision in such a fashion as to procure good and continuous performance with full regard to the satisfaction of their material and psychological needs.

To perform these functions successfully a supervisor must have a thorough understanding of the job he is expected to do. He must have an adequate knowledge of methods, materials, and machines. He must see clearly the relationship between his unit and the or-

ganization as a whole. Above all, he must have an understanding of the people with whom he is working, and the ability to enlist their full and willing efforts in the accomplishment of the job to be done.

A large part of our current supervisor training is based on the assumption that technical or mechanical skill in any given occupation is the first requisite for successful supervision. Yet experience has demonstrated time and again that no amount of operating skill, of engineering or business administration background, can alone insure a man's success as a supervisor. However skilled a man may be in a craft, trade, or profession, he will fail in supervision if he does not have the ability to get other people to perform work for him, and perform it willingly. In every case, the supervisor's principal function is *human leadership*.

The Aims of Supervisor Training

Any organization has two needs in relation to its supervisory personnel: it must have supervisors who are equipped to perform satisfactorily on the level and in the jobs where they are currently placed; and, in addition, it must protect itself against stagnation and decline by continually preparing men for the assumption of new and more responsible positions. Regardless of the level of supervision for which personnel is being trained, regardless of the type of business or industry involved, two major aims are fundamental to any program of supervisor training:

1. To develop supervisors who can carry out the functions assigned to them with maximum satisfaction to management, their subordinates, and themselves.
2. To insure the vitality and continuity of the organization by assisting each supervisor in the discovery and utilization of his potential abilities.

Only if these basic aims are kept constantly in sight and employed as criteria for determining the value and significance of proposed subject matter or methods can supervisor training make its full contribution to the management, supervisors, and employees in commerce and industry.

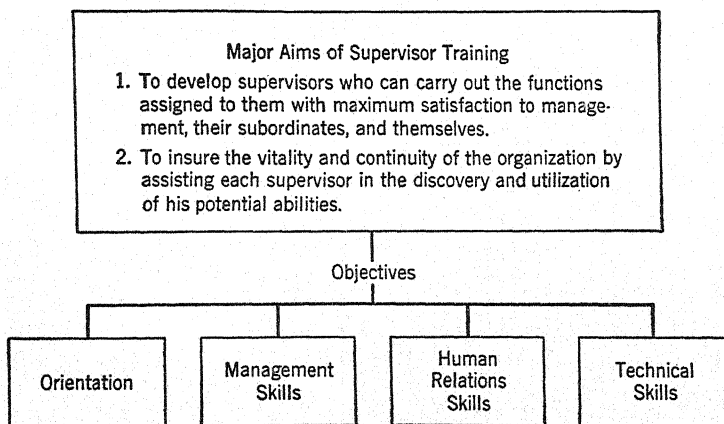
Specific Objectives of Supervisor Training

The two major aims of supervisor training indicate ultimate purposes. They represent the end accomplishment toward which every aspect of this training must be directed. We must next indicate the

specific objectives which will make possible the translation of ultimate aims into immediate, day-to-day plans and practices. These objectives are four in number :

1. To familiarize the supervisor with company policies, practices, and procedures that affect his job directly or indirectly. This amounts to *orientation* of supervisors.
2. To acquaint the supervisor with principles and practices of scientific management—organizing, planning, commanding, controlling—and to assure observance of these principles in his daily work. Here the objective is to present those *management* skills that help to make supervision a profession.
3. To acquaint the supervisor with the basic principles of human behavior and to help him to recognize and utilize these principles in his day-to-day work. The goal is to make the supervisor a practical expert in *human relations* skills.
4. To provide supervisors with the technical knowledge and skill necessary for the successful performance of their jobs or for advancement to more important jobs. This is the most familiar of the four objectives. As we have seen, *technical* skill, in the sense of proficiency in the operation being supervised, has long been a primary requirement.

Graphically represented, the major aims and the specific objectives of supervisor training assume the pattern pictured as follows :



Let us examine each of these specific objectives in greater detail.

Orientation.—The objective is to familiarize supervisors with those company policies, plans, and procedures that affect their jobs directly or indirectly.

This requires training in the organization, history, and management philosophy of the company; the product, including quality standards and projected developments; personnel policies; and the functions of staff and service departments, such as purchasing, quality control, cost, sales, research, and maintenance.

Although this phase of training is usually considered most important on the presupervisory level or in the preparation of men who are moving to a higher level of supervision, many companies have recognized that even the supervisor of long years' standing needs this type of information. Industrial foremen and office supervisors complain that management ignores them when it formulates new plans and policies, and in many instances even fails to keep them informed on such matters. Information comes to them from gossip, local newspapers, or the union steward. A prominent industrial relations counselor stated recently that he had visited many companies in which supervisors were compelled to turn to the union stewards for their information on the union contract. These companies had not felt the need or desirability of teaching supervisors the essentials of the labor agreement under which they were operating. Since supervisors represent their employers and often act for them, it is not surprising that these same companies spend considerable sums of money on the services of consultants and lawyers in an effort to straighten out their tangled labor relations.

Many companies also fail to keep supervisors informed in other areas that concern them. Most of the friction that develops between departments, and especially between line and staff units, can be traced directly to misunderstanding or ignorance of their respective functions and authority. These differences can be largely eliminated by the full explanation of new systems and procedures in advance of their introduction, and by making every supervisor in the organization familiar with the work being done by his line and staff colleagues. If a supervisor is to perform his job satisfactorily, if he is to be prepared for promotion within the organization, then this objective must be met fully and with every medium at the command of management. Supervisors must be made a genuine part of the management team before they can convey this sense of belonging to their subordinates.

Orientation is a process that must continue as long as the supervisor remains in the employ of the company. A supervisor cannot be oriented once and then forgotten or left to his own devices for the rest of his working life. Yet most companies fail to provide this continuous training. Any number of companies have admirable plans

for introducing newly hired men to the organization. Some companies have gone a step further and have set up excellent refresher sessions to pump new information and enthusiasm into devitalized and confused supervisors. But only a few of the most enlightened companies have realized that there must be a constant, planned flow of information through an organization, from top to bottom and back again. The man who, in answer to a question about his company's plans, exclaimed, "How should I know? I'm only a foreman," was speaking for thousands of his brothers in supervision all over the country.

The supervisor needs information, but old channels of communication no longer can bring it to him. The boss of a shop could talk to his foreman; the president of a huge corporation cannot do so. Even if he tried, he would find himself without the intimate personal relationship which once let the top man pass on news to his subordinates and experience their reaction to it. The only recourse in the face of this bigness is systematized communication, the formal, planned distribution of information. That is a specific and urgent function of training.

Management Skills.—The objective is *to acquaint supervisors with the principles of scientific management and to assure their observation of these principles in their daily work.*

Experience has shown that certain basic principles underlie the operation of any enterprise. The supervisor must know these principles and work in accordance with them if he is to avoid failure. He must know, for example, the principles of organization upon which his company and his department should be founded.¹ Chief among these, and perhaps the most flagrantly violated of all principles of organization, is that of *unity of command*. A man must have only one boss to whom he looks for orders and directions. How many times and with what far-reaching and disastrous effects do we see this principle violated in organizations in which orders and counter-orders, instruction, directives, and advice descend from all directions upon the confused worker! In bewildering succession, the employee receives directions from his immediate supervisor, from the quality inspector, from the cost department, the industrial engineer, the personnel department, and from a host of other self-constituted authorities, until in desperation and disgust he takes a lesson from the weather vane and moves in the direction of the latest or strongest wind.

¹ For a very good discussion of these principles, see Alford and Bangs, *Production Handbook*, New York, The Ronald Press Co., 1944, pp. 1383-1388.



Form 10. Foremen's Conference



Form 11. Teaching Techniques in Conference Leadership

No organization can function harmoniously under these conditions. Nor can it operate effectively when there are too many or too few supervisors for the number of employees involved, when duties and responsibilities are so inadequately defined as to lead to buck-passing or the snatching of authority by ambitious supervisors, or when duties have been allowed to accumulate like barnacles around various jobs without reference to sound functional arrangement. The supervisor must know the principles violated in these failures. He must be helped to apply them in his own situation by drawing up and analyzing organization charts of his own unit, by developing individual job descriptions, by the institution and rigid observance of channels of command through which orders flow in a systematic fashion from top to bottom. He must be encouraged to do the very jobs that would be done by any management specialist who might be called in to prescribe for an ailing organization. The ultimate success of any organization depends in large measure upon the completeness with which all supervisors, from gang leader to president, understand and apply these principles.

In addition to the principles of organization, this objective of supervisor training calls for instruction in phases of modern scientific management, such as time and motion study, job evaluation, scientific selection, cost control, and production control. The purpose of this is to develop appreciation of the skills and techniques involved and to acquaint supervisors with these services as aids to their daily work.

The following descriptions of conferences and courses, which are being given by various training departments, illustrate the type of work being done in this field:

(a) *Quality Control* in a farm machinery company is developed in the conference room by means of a plan designed to help the supervisor establish and control standards for work under his jurisdiction. The plan is a practical and proved method and the principle can be applied to any type of work. Actual problems are used in the conference room.

(b) *Time Study* in the same company is developed in the conference room through demonstration. The three types of studies—actual, comparable, and estimated—are explained. Standard allowances and the appraisal of conditions surrounding the actual time study are discussed and clarified. The supervisor's part in securing good time studies is emphasized.

(c) *Job Control Training* in a cosmetic concern deals with the application of standard costs to manufacturing operations, and with the best method of analyzing and using this method of cost control.

These courses, and the many others now being offered, are evidence that progressive managements recognize supervision as a distinct profession calling for skills and techniques that are separate from and often more complex than those required of the worker. For this reason, over and above the technical skills of the job he is supervising, the supervisor receives training in the science and the art of management.

Human Relations Skills.—The objective is *to acquaint supervisors with the basic principles of human behavior, and to help them to recognize and utilize these principles in their day-to-day supervision of subordinates.*

Thanks to the efforts of such men as Henry Ford II and Charles Luckman in industry, and Kurt Lewin, Peter Drucker, Elton Mayo, and E. Wight Bakke in the universities, there is a growing realization of the importance of *human relations* in business and industry. Leaders in commerce and industry realize that business has made great technical advances while standing almost still socially. We have exploited the possibilities of machines and methods to the utmost, but we have neglected and sometimes opposed the development of human resources.

Many companies have recognized the existence of this condition and have striven to improve their understanding of the field of human relations. Opinion analysts have been hired to take the pulse of plant and community; industrial relations experts have diagnosed the puzzling ailments and prescribed panaceas. The employee has been treated to large doses of music-while-he-works, smart uniforms, bonuses and pay increases, and awards for thinking, for getting to work regularly over a period of months or years, or for guarding against injury to himself on the job. He has been given free entertainment, free insurance, free lunches; yet where these are the only steps taken his attitude has shown no substantial improvement. He has accepted these medications but has responded with continued mistrust instead of the anticipated gratitude and cooperation.

This is not to say that music on the job is nonsense, or that increased wages are not necessary. Indeed, all these devices have merit, but none of them alone nor all combined will produce the kind of employee relations which business desires and which it urgently needs. The key to sound employee relations lies, first of all, in the attitudes and actions of top management. These attitudes and actions must reveal a sincere conviction that business, like democratic government, exists for the good of all concerned—in this case, the

customer, the employee, the stockholder, and the community. Second, good employee relations depend upon a supervisory staff, from the highest to the lowest level, that reflects this philosophy of management in every plan, every command, every action that influences employees. If this sounds like a large order, it is only proper, for the job is a difficult one. It is as complex as the human mind, as varied as the situations that arise in any average day, as long as the life of the business or industry concerned. Only failure—utter failure—to realize the complexity of the job has led top executives, personnel directors, and even training directors to grasp at commercially exploited systems and services that promise to do the work for them with one wave of a gold-plated wand.

But how is supervisor training to undertake a task of such magnitude? If we expect to make an expert automobile driver out of a novice, we should first give him some basic understanding of why and how an automobile operates. We could, of course, turn him loose with the car in an open field and let him grind and batter his way to proficiency. But since gears and fenders are easier to replace than good employees, this method has nothing to recommend it. We therefore must use the first approach and give the supervisor a basic understanding of why and how human beings operate.

As a foundation for a full understanding of the human relations aspects of his job, the supervisor requires an introduction to human psychology. He must know the fundamental drives, both biological and psychical, that underlie all behavior. He must know, too, that the morale of employees, individually or as a group, varies directly with the degree to which these basic drives are satisfied.

Although the classification of drives differs from one school of psychology to another, the supervisor need consider only four in order to understand and explain the behavior of employees. These four are the drives for *security*, for *recognition*, for *belonging*, and for *new experience*. A major part of training for leadership must be devoted to the analysis and clarification of these factors as they function in office, store, or plant.

Almost as important is the task of breaking down long-established misconceptions about human behavior. Training must help the supervisor to discard his prejudices and superstitions; it must teach him to measure people in terms of their actions and their motives rather than their facial characteristics, their race, their religion, or their political affiliation. The supervisor must discard the comfortable notion that logic and reason are the sole keys to human behavior, and recognize instead that men and women, including himself, often are

illogical, irrational, emotional. Above all else, the supervisor must recognize and act on the principle that each person is an individual, responding to situations in terms of his own concept of what he needs and deserves. This "ego" concept, moreover, develops throughout each individual's life, and therefore changes constantly. When these and other fundamental principles of universal human behavior have been established, the supervisor will be in a position to handle intelligently the everyday work situations involving human relations.

Under this human relations aspect of training there must also be considered such subjects as the induction of new workers, methods of giving orders and directions, selecting, training, and upgrading employees, correcting and improving subordinates, and the supervision of such special groups as the physically handicapped, the veterans, and the aged. In every instance, the detail with which the subject is treated will depend upon the experience and the ability of the supervisors being trained. At all times, however, the purpose should be to deal with principles and their application. Until supervisors learn these basic principles of human relations and can recognize them in any situation, their efforts will be faltering and ineffectual, and they will have to face each new problem as if it never had existed before.

Technical Skills.—The objective is *to provide the supervisor with the technical knowledge and skill necessary for the successful performance of his job or for advancement to more important jobs.*

This phase of supervisor training usually receives the greatest emphasis. Schools and colleges that devote their energies to the education of men and women who will become supervisors in business and industry have established excellent courses of study in accounting, chemistry, engineering, commercial art, banking, and a hundred other fields. They have turned out graduates who are skilled technicians in their various fields. The same result has been accomplished in industrial training, and it is largely to this development of technical skill that we owe our phenomenal capacity for production.

Although technical ability and training are not the most important factors contributing to the success of a supervisor, no one would suggest that they lack value. Careful thought therefore must be given to the technical aspects of supervisor training. Unlike training for leadership which is basically the same for all leaders, the technical training of supervisors must be adapted directly to the work in their own divisions or departments. As a result, programs show great diversity in scope and subject matter. An aircraft industry,

for example, offers supervisory training in blueprint reading, shop mathematics, metallurgy, machining methods, gear theory, and inspection methods. An air line offers a special course on International Business Machines used in its offices. A manufacturer of fire extinguishers gives courses in annealing and heat treating, soldering procedures and metallurgical chemistry. A tractor manufacturer presents foundry practices, welding, and accounting. A list of purely technical courses for supervisors would be endless, covering everything from hydrostatics to showcase display, and from aerodynamics to English, public speaking, and report writing.

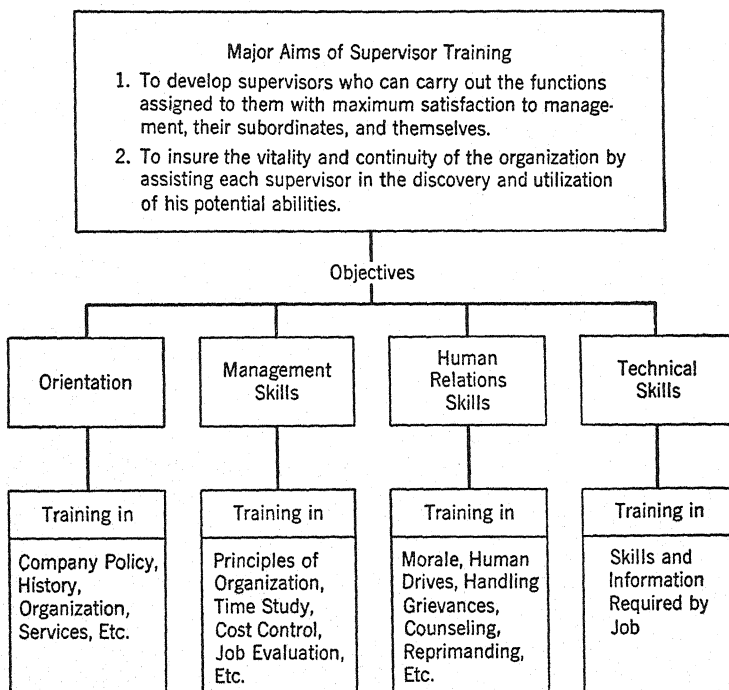
American business is exceedingly diverse, and its needs are even more so. Generally, technical proficiency is developed before a man becomes a supervisor. His need for technical training then is less urgent than his need for instruction in the fundamentals of management and leadership. If he requires technical training, he probably will do so because of new technical developments or the widening scope of his job. His needs then must be met, as shown in Chapter 15, through in-plant training courses or by local schools and colleges. Far greater facilities exist for the accomplishment of this objective of training than for any of the others.

Summary

To summarize this discussion, we must keep in mind that the *general* function of the supervisor is to promote the integration of workers, machines, material, and time so that a given job can be accomplished efficiently and economically. From a close examination of this general function, we have discovered that the supervisor's principal specific function is to exercise human leadership, and that supervisor training has two major aims and four specific objectives. These aims and objectives are presented in the chart on page 173. We can now add to this chart by listing some of the important subjects through which these four specific objectives can be achieved.

An examination of the chart which is presented on page 180 shows how each course contributes directly to the accomplishment of one of the four objectives and, consequently, to the ultimate purposes of supervisor training. Courses in company policy, history, organization, and services will help considerably in the orientation of supervisors; the company must realize that it is essential to keep the supervisor informed in all areas that concern him, and that this orientation must continue as long as the supervisor remains in the employ of the company. Training in principles of organization, time

study, cost control, and job evaluation will help to develop management skills, and is especially important in acquainting supervisors with the basic principles and objectives of a particular operation. Training in morale, counseling, handling grievances, and reprimanding will help to develop the supervisor's skill in human relations; this training should emphasize the importance of the drives for security, recognition, belonging, and new experience. Training in the skills and information required to perform his job will help to develop the supervisor's technical proficiency.



In the accomplishment of the foregoing aims and objectives, subject matter becomes even more important than a superficial observation might lead us to conclude. When every conference and every course offered to supervisors is scrutinized and evaluated in terms of the two major aims of supervisor training, then the day of the unrelated package course and the grab-bag program will be over.

CHAPTER 14

METHODS OF PRESUPERVISOR, SUPERVISOR, AND EXECUTIVE TRAINING

Having established the aims and objectives of supervisor training, and having indicated the type of subject matter through which these aims and objectives may be attained, we are now in a position to discuss and evaluate the methods of supervisor training. We shall examine the most valuable methods in current use and categorize them according to the training situation in which they are most commonly used. These methods, it will be seen, are the vehicles for subject matter. As such, they must be adapted to content as well as to objectives sought.

Formal Group Training

Both the lecture and the conference are well-established methods that may be used effectively in formal group instruction. Unfortunately, many training directors have condemned the lecture as an academic tool which has no place in supervisor training. Poorly handled, it may have many defects. It may be dry, autocratic, boring to persons unfamiliar with school situations. On the other hand, lecturing need not be and is not always an unsatisfactory method. A good lecture, well organized and well delivered, with proper illustrations, demonstrations, and changes in pace, is a very effective means of presenting information and arousing interest. It is especially suited to the needs of top management, since executives generally are more accustomed to giving sustained attention to oral presentations than are some lower level supervisors. On the whole, executives also have superior vocabularies, so that the lecturer is not hampered by problems of expression and runs less risk of talking over trainees' heads.

The conference, on the other hand, is the more generally accepted method of supervisor training. It is said to be more democratic than the lecture, since it draws heavily upon the contributions of the group and subordinates the part played by the conference leader. The conference method is most useful when supervisory trainees already know principles and need only encouragement and practice in their application; or when the object of the training is more to encourage

supervisor participation and discussion than to teach subject matter or to arrive at any particular conclusions; or when a practical problem is to be solved, and it is desired to solicit practical recommendations for its solution as in the development of a suggestion system or specific personnel practices.

The great weakness of the use of the conference method to date has been the widespread espousal of the so-called "free conference," a conversational boat ride on uncharted seas to an unknown port.

Between the lecture and the free conference there is an intermediate device, the "planned conference," which is being used effectively in a growing number of supervisor training programs. The planned conference resembles the lecture in having a predetermined structure and goal toward which the conference leader directs discussion. In fact, the leader assumes the role of lecturer for brief periods in order to give members of the group information which they do not possess; then he returns to discussion in order to enable each trainee to interpret this information and give it meaning in terms of his own individual experience.

There are many variations of group meeting situations in which the lecture or the conference is used. They may be a part of the regular supervisor training curriculum; they may be the regular weekly or biweekly staff meetings; or, when time is of particular importance and advance planning is not possible, they may be special meetings called for the discussion of a specific subject.

An approach used by many companies that have offices or plants scattered about the country is the so-called "Home Week," during which supervisors from the various localities meet at the home plant for a review of company policies and practices. Held annually, these visits are intended not only to bring supervisors up to date on latest developments, but, more significantly, to bridge the physical gap existing between top and middle management in large concerns. The typical program would deal with such a range of topics as company organization, future markets and economic problems, controller's department operations, advertising program, production planning, how the industrial engineer can serve production, trends in collective bargaining, and management-employee relations.

Handbooks and Bulletins

Several devices and techniques may be used as adjuncts to the lecture-discussion and conference methods. One of these is the periodic bulletin or newsletter, published by the company and distributed to all supervisors. This publication may take the form of an elabo-

rately printed and illustrated leaflet, or it may be a simple mimeographed affair. Regularity and completeness of information are more significant than format. Such a publication usually offers information about broad company policies and projects. Any company, regardless of its size and whether or not it has a regular training department, can profitably adopt this method of informing and educating supervisors.

Handbooks on standard procedure or policy offer another aid in orienting both new and old supervisors. Every supervisor should have a complete written statement of all practices and policies that affect his job. No organization can long operate with success if it fails to provide this information to the people who must use it daily. Most companies recognize this fact and take pains to give the new supervisor this information and to keep established supervisors informed of all changes in policy.

There is a further step, however, that has been taken by only a few farsighted companies. This is the establishment of supervisors' committees for formulating policy, the purpose being to give supervisors an opportunity to discuss and to institute policies under which they must operate. Large companies employing many supervisors find it necessary to rotate membership or to establish subcommittees within departments to give everyone a share in this enterprise. In small companies, however, the entire supervisory group can gather to discuss all new policies. This procedure is slower than the autocratic method of policy formulation on the top level, but it insures a full understanding and acceptance of the policies that are introduced, and removes the danger that supervisors will resist or make their own amendments to policies imposed from above.

Role-Playing

Anyone who has participated in or conducted many supervisor training classes often must have been disturbed by the discrepancy between the supervisor's apparent understanding and acceptance of principles in the classroom and his subsequent conduct on the job. In large measure this difference arises from failure of both lecture and conference method to provide the supervisor with an opportunity to practice what he has learned.

One solution for this problem is the use of "role-playing" as a method of instruction, especially in the field of human relations. Role-playing involves dramatization of work situations in which the supervisors in the class play the roles of actual participants. As supervisors act out these roles, they project themselves into problem

situations and receive an opportunity to practice what has been preached. In typical situations involving reprimanding, assigning work, promoting, and instructing, they must speak and act as good supervisors. They must actually handle the situation in accordance with good human relations and organization practices, and must submit themselves to the critical evaluation of their fellow-supervisors. In addition, since each supervisor plays the role of both supervisor and worker, he can actually experience in the role of worker the effects of the good or bad handling of a situation. Supervisors also have a chance to correct errors, an opportunity they rarely have in the actual work situation. Finally, both in their own observation of other supervisors and in the candid criticism of their colleagues, they are made aware of flaws in their own supervisory conduct which they have not recognized before, and which few subordinates would have the temerity to call to their attention. In all these respects role-playing provides the advantages of "learning by doing" that are lacking in an ordinary conference or lecture.

Role-Playing Illustrated.—So new is role-playing as a method of instruction that a more detailed examination of this technique may be useful. The following outline is a general description of the succession of events in a typical role-playing session:

1. Begin with a short discussion of the general area in which lie the problems to be taken up. The group may be encouraged to tell about cases that illustrate the various aspects of the problem.
2. Select and send out of the meeting room two or three of the trainees. If this is the first attempt at role-playing, try to select individuals who you judge will have least trouble in entering into the spirit of the thing, and spend a few minutes explaining what role-playing is all about.
3. Describe to the group the problem situation which will be played out. (This has been prepared by the trainer in advance of the meeting. It might be a situation in which a foreman has decided to have a talk with one of his men regarding excessive absenteeism.) Give enough background material so that the problem becomes alive.
4. Select a member of the group to play the role of the worker, or in initial sessions the trainer himself may play this role.
5. Ask the group if there are any questions—if the problem under consideration is clear. Suggest, or better obtain from the group, possible lines of action that the foreman might take, and orient the group toward watching the ensuing play with the set, "How could it be done better?"
6. If the play is to take place in the foreman's office, set before the group a table and two chairs and furnish enough "props" to make the situation quite realistic.
7. Call in one of the men waiting outside. Have him take his place

at the desk and explain the problem to him. (It is usually interesting in a problem such as this to say nothing of the worker's resistance to revealing the reason for his absenteeism. Let the foreman discover it for himself, as he would in a real situation.) Make sure he understands the setting, and then start the action: "The problem is clear? Very well. You are in your office and you had asked Jack to come in. Here he is. He walks in and says, 'Did you want to see me, Mr. Frank?'"

8. This kind of situation may end by itself, with the man going back to his place of work. Some situations, however, do not come to an end naturally if left alone. In such a case, the trainer must decide when the play has gone on long enough for the purposes he has in mind, and arbitrarily end it.

9. Have the primary player take his place with the group. Sum up the action that took place. Do not at this point enter into a discussion as to how it could have been done differently. Rather, prime the group to look for differences between what they have seen and the next play. It is helpful to outline the events of the first play briefly on a blackboard, and cover it before the next man comes in. If the first player has had difficulty because of factors in the problem of which he was not aware (the resistance of the worker against explaining the cause of his absenteeism), explain them to him so that he, on a par with the rest of the group, can watch the second player.

10. Call in the second player and repeat instructions. The man taking the role of worker essentially repeats his previous behavior.

11. When the second play has ended (assuming you sent out only two persons) sum up the action of the second play and review what happened in the first one. The review is important because the second player must be brought up to date. If you are using a blackboard, you will now have two outlines, side by side, each describing the action in one of the plays.

12. Before general discussion evaluating the two performances begins, it is usually best to ask all three of the actors for their reactions. This gives the players a chance to "save face" by themselves pointing out the errors that they may have made, and serves to give the group additional information. It is often helpful to prompt the man playing the role of worker by such questions as: "Which foreman do you think you'd rather work for? Why?"

13. Open the meeting to general discussion. As a result of the discussion try to get a third column on the blackboard indicating what the group now feels would be the preferred foreman behavior.

14. Select a member of the group who has not yet played a role and have him act out the foreman's role along the lines indicated by the group. Instruct the group to watch carefully for flaws in what they have set up as "preferred" behavior.¹

Demonstrations.—A more widely used device is the demonstration—a sort of vicarious role-playing in which supervisors watch the dramatization of a work situation, customarily showing first the

¹ Alex Bavelas, "Role-Playing and Management Training," *Publications in Social Science*, Series 2, No. 21, Massachusetts Institute of Technology.

wrong way to handle a situation and then the right one. Demonstrations permit the highlighting of certain commendable or deplorable practices. Because they can be planned in advance to fit the needs of a specific group, they have the further advantage of showing individual supervisors their own faults without actually exposing them to group censure.

The demonstration is used often to show incorrect induction and training methods, unsafe work practices, poor production methods, and a host of other supervisory shortcomings. The negative rather than the positive approach is used. Considerable care must be taken to make sure that such demonstrations do not degenerate into amateur theatrical ventures whose primary purpose is amusement.

Problem Cases.—The problem case is a third device which is one step further removed from “learning by doing,” but a valuable supplement to lecture or discussion. The problem case may take the form of a written problem followed by questions intended to elicit discussion and bring out certain principles and practices, or it may consist of a written dialogue which the instructor presents to the group, interspersing questions and comments as he goes. Like the demonstration, this device comes closer to real situations than the formal lecture or discussion.

All these devices point to the growing recognition of the profound truth that the principles and practices of leadership can be fully meaningful only when they are translated into action. Actually, there is no behavior which is not role-playing of a sort. Supervisors must learn to control and direct their old roles rationally, and in addition they must learn new ones. It shows intelligence rather than hypocrisy on the part of a supervisor when he consciously and skillfully plays the part for which he has been selected and coached.

On-the-Job Supervisor Training

Classroom instruction must be accompanied by on-the-job training which applies principles already learned, but does so under guidance. Supervisors must develop control charts and graphs for their own units, discuss such problems as the amount and source of waste, learning time, labor turnover, or customer complaints, and set up practical systems for recording and analyzing significant data.

When supervisors in the classroom discuss the induction of new employees, they should also develop induction programs for their own units. Similarly, when the subject is merit rating, job training,

upgrading, reduction of absenteeism, or any other subject that lends itself to immediate practical application, the classroom discussion must be accompanied by use of the new ideas and new methods on the job. Unless this essential step is taken, supervisor training will be sterile. Controlled practice must bridge the gap between understanding and acquiescence in the classroom and use on the job.

Rotation Training.—A formal, planned approach to the on-the-job training of supervisors from the presupervisory to the executive level is provided by the "rotation method." Potential supervisors or even established supervisors who need development in some particular function may be assigned to work with another man who is experienced in that function and who has the time and the ability to transmit his superiority to others. Rotation may be used as a method of orienting supervisors to the operations of the entire organization.

Although the rotation method has been widely used, particularly among the nation's largest concerns, results accruing from it have not been uniformly good. In those instances where the plan has failed, the reasons are quite apparent. Planning has been inadequate. There has been no definite assignment of responsibility for the training of the men being rotated. Where responsibility has been assigned, the department heads given the job of teaching the trainees have been offered little assistance in the development of teaching aids or schedules.

If rotation training is to be effective, the program must satisfy several important conditions:

1. There must be a definite scheduling of assignments, controlled by the training department, designed to meet the particular needs of each trainee.
2. A pattern of progression must be established that will insure against the piling up of trainees in any department.
3. Department officials responsible for this training must be guaranteed sufficient time for their teaching and must be given aid in the organization and presentation of their material.
4. There must be opportunity in the company for the absorption of trainees into the organization. The creation of a large pool of trained supervisors for whom there are no opportunities can lead only to discouragement among new men and a conviction that the company's stated policy is mere window dressing.

Follow-Up; Individual Training and Guidance.—The supervisor's training cannot stop once a particular course has ended or once he has mastered the intricacies of his assigned job. If we are

to meet the second of our major aims—the development of the individual's potential abilities—training must be continuous and must be adapted to the needs of the individual supervisor.

This means, first of all, that full use must be made of the various devices by which individual capacities can be estimated. Standard tests of aptitude and ability, of personality and intelligence, will give some indication of the supervisor's potentialities. Merit rating of such subjective factors as industry, reliability, and initiative provides a picture of strengths and weaknesses. Finally, the objective analysis of the supervisor's performance of major functions, such as cost control, quantity and quality production, and human relations, completes the picture of the man in terms of which an individual training plan can be devised to capitalize on his peculiar strengths and interests, and to build up those areas in which he is weak.

Training Different Levels of Supervision

No effort has been made in this chapter or the preceding one to break down the training of supervisors according to organizational levels. The reason for this should be evident. Just as the supervisor's job is basically the same regardless of the type of business or industry in which he is employed, so is supervision essentially the same on all levels, from that of the lowest group leader or crew chief to the top executive. Each supervisor must carry out the basic functions of organizing, planning, commanding, controlling, and improving. Differences lie in degree of responsibility and authority rather than in the functions performed. For that reason, there can be between the top and the bottom of the supervisory ladder no great difference in training needs. It is superfluous, perhaps, to say that presidents and vice-presidents mismanage quite as often as their less exalted brothers. They make the same errors, violate the same principles, suffer from the same blind spots. The major difference between them is that the errors made at the top have more widespread and often more serious results.

There are other differences, however, which must be recognized if a training program is to be practical and successful. These differences lie mainly in the men themselves rather than in the jobs. First-level supervisors, as a general rule, are men and women with much less supervisory experience and perhaps with less native ability than top executives. They have not achieved their positions through the rigorous selection, both automatic and planned, that singles out the few leaders at the apex of the organizational pyramid. In conse-

quence, the training presented to first-level supervisors must be more limited in scope, must concentrate on fundamentals, and must at all times illustrate principles with a wealth of examples from the supervisors' jobs. Because they are lacking in experience or because they do not have the ability to draw their own practical applications from abstract principles, first-level supervisors may become impatient and dissatisfied with pure theory. Although they, as well as top-level executives, must come to understand and apply principles in their supervision, the teaching of these principles must be liberally supplemented with problems, demonstrations, and on-the-job experiments. At this level of supervision the role-playing technique is of especially great value.

On the executive level, on the other hand, it is possible to work with general concepts, since trainees usually have accustomed themselves to thinking in appropriate terms and have the type of intelligence that can master abstract ideas. Frequently, too, high-level supervisors prefer lectures, finding the conference method of training irksome in its indirect approach to problems. They may even allow the trainer to abandon subterfuge and treat training as education. Most of the men in top executive positions today have been exposed to education before, even in its more rarefied forms, and they are not afraid of it. What is more, they are very apt to resent training that disguises itself as entertainment, or that expects the trainee to lift himself by his own bootstraps while the instructor stands by quietly admiring his tedious efforts. Executive training must present the same principles that are presented on every other level; however, starting with the presupervisor group and coming up through the various levels to the top executives, the training must become broader and more penetrating. Just as the student of mathematics works his way from simple to extremely complex problems, always using the same fundamental principles, so the student of management must work his way from simple to complex problems in organizing, planning, commanding, controlling, and improving, as he advances up the supervisory ladder.

One approach to executive training is the seminar. Here the object is to present to top supervisors sessions which deal with subjects of current interest or importance over and above the regular courses for supervision. The subject of one of these seminars may be a recently published book which offers some new and valuable contribution to the field of scientific management. Another may summarize and analyze a research study in the field of human relations, or review a particularly successful management practice of

some other business or industry. The instructor generally offers the executive group a list of topics from which to choose, and presents those in which there is the greatest interest. Each meeting usually includes an informal lecture, followed by a period of questions and comments. Seminars of this sort may be held as frequently as time and the interest of the group indicate. They should be regarded, however, as a supplement to basic management training rather than as a substitute for it.

Actually, then, differences in the training programs and methods on the various supervisory levels are not as significant as the labels applied to them might suggest. On all levels, supervisors are working with men, materials, machines, and time. On all levels they must accomplish the same basic functions. The principles involved are the same in every case. It is only the situation in which they are applied that differs.

To summarize, we may set up the following criteria for determining training content and methods on the various levels.

1. *Presupervisory training* must present basic principles in the areas of management and human relations skills. Special emphasis should be given to orientation and technical training.

The rotation plan is a method of special value at this level. Material presented must be dramatized and applied for the benefit of those who have not had experience in supervision. Much care must be taken to develop a management point of view.

2. *Supervisor training* must also present basic principles of management and human relations. There is the added problem, both here and on the next level, that many habits and concepts may have to be unlearned before training can become effective. The orientation phase of training is important, since it involves an understanding of staff and service departments and the presentation of projected company plans. Technical training will probably be limited to new developments in the field, to refresher courses, or to preparation for new and wider responsibilities.

The planned conference is useful with these supervisors because they have mastered basic principles, have had experience in supervision and consequently have ideas and problems to discuss. Unless they are an unusually high-level group, however, they require much assistance in applying principles to their own work situations. They also need ample opportunity to practice new methods and procedures in controlled situations.

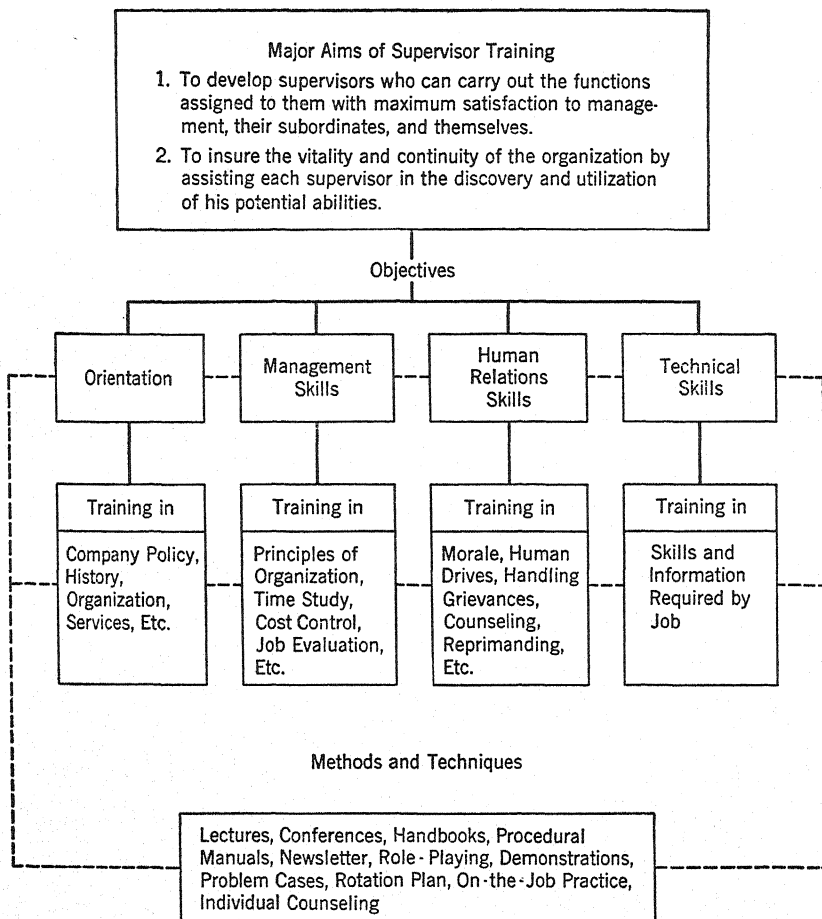
3. *Executive training* must have its foundation in the basic principles of management and human relations. A full understanding and acceptance of these principles is vitally important on this level, for top executives set the pattern for the rest of the organization. Orientation takes on a different aspect here. Since these men formulate policy, they need not be informed about it. Because they are frequently specialists, highly skilled and interested in a limited field, orientation must broaden their vision and help them look at the whole organization and to understand the place of their own specialty in it. Technical training for men on this level is likely to be centered on management and human relations, since their technical field is management.

The methods used, as we have seen, must be adjusted to wider experience and perhaps to superior natural ability. Teaching must be direct, forceful, and realistic. In large measure it must be designed to provide executives with information that they would not otherwise have the time to acquire.

Summary

In this chapter and the preceding one we have discussed the major aims and objectives of supervisor training, and the subject matter and the methods through which these aims and objectives may be attained. Completing our representation of the interrelationship and relative position of aims, objectives, subject matter, methods, and techniques, we arrive at the chart shown on the following page.

This chart shows that all supervisor training focuses upon the two major aims. In the organization and administration of a supervisor training program these aims must be kept constantly in mind and condition every plan that is made, every class that is taught, every bulletin that is issued. But there are certain specific, limited, and immediate objectives that serve as short-range targets, and determine, in large measure, the attitudes, knowledge, and skills which supervisors must have. These objectives can be fulfilled by the presentation of subject matter which assumes its rightful place in the structure as a means rather than an end in itself. The supervisor should be taught the principles of human behavior, organization, and of mechanics, not because this information is important and sufficient in itself, but because it contributes to the accomplishment of one or all of the objectives. Finally, methods and techniques enter into the picture primarily as vehicles for subject matter.



The object in reiterating and accenting these aims and objectives is not to suggest that there is any ready formula for supervisor training. The purpose is to focus attention repeatedly on its goal. Training directors and administrators must give up their search for the magic device, the five easy lessons, the Rube Goldberg educational gadget by which supervisors are to be transformed. Instead, they must recognize training as a broad developmental program demanding professional administration and full, intelligent management support and participation. When they do, supervisor training will come of age and through the enlightened supervision which will result will make real the promise of better production, lower costs, and better trained and more loyal employees.

CHAPTER 15

TECHNICAL AND PROFESSIONAL TRAINING

What Is Technical and Professional Training?

Originally the term "profession" was limited in meaning to include only the so-called learned professions of law, medicine, and theology. Popular usage has extended the meaning, however, until today the term is applied to almost any vocation whose practitioners want to dignify their calling. Somewhere between these two extremes is the definition applicable in this discussion. Perhaps the easiest standard to apply in identifying a profession is the amount of specialized formal education required in preparation for it. For example, the various types of engineering—civil, mechanical, and electrical—require at least four years of intensive college study and often specialized graduate work. The industrial chemist, the bacteriologist, and the agronomist are products of university training. Industrial engineering, industrial relations, business management, finance, government, hotel management, and economics all are fields in which college training is now regarded as necessary. It is to vocations such as these that we refer when we speak of professions and professional training.

Technical training differs from professional largely in the degree of specialization. Technical training is a part of professional training. A professional man not only has mastered the techniques, but also has acquired that knowledge and judgment necessary to control, guide, and direct them, to give them meaning and purpose, and to integrate them with others that are related. Whereas the profession requires at least four years of college training or its equivalent, the technician's job, as it is here defined, demands less specialized educational background. In the personnel field, for example, an employment interviewer, a test administrator, or a job analyst may be called a technician. Specialized training is required in preparation for these positions, but not so much, nor of such basic nature as is demanded by one of the professions. Similarly, the jobs of laboratory assistant, practical nurse, inspector, draftsman, commercial artist, and bookkeeper may generally be regarded as technical rather

than professional. In some instances the distinction is obvious; in others it is so finely drawn as to rest on interpretation.

Since both professional and technical jobs have been defined here largely in terms of the amount of preparatory education required, there may be a question as to the part that the training department can be expected to play in the development of such specialists. Certainly the training department cannot be substituted for a university or a technical college. No one would propose that the graduate chemist, the corporation lawyer, or the electrical engineer should be prepared fully through in-plant training. There are, however, many functions that training can perform for such persons. This chapter is concerned with this in-service training, primarily for professionals and technicians, but also for other employees or supervisors who may need appreciation or specific technical courses.

Preliminary Educational Guidance

One of the first services that the training department can perform in connection with the education of professional personnel and technicians is to guide young and highly capable employees into these specialized fields. There is nothing new in this; it has long been the practice of many progressive companies to select employees with high potential ability and to subsidize their education in the hope that they will fill key positions. On a less elaborate scale many more companies pay part or full tuition costs for employees who take courses which prepare them for promotion or for the better performance of their regular jobs.

The training department, if it is staffed with professional educators, is the unit best prepared to guide efforts of this sort. Through its contacts with every employee, starting with orientation and continuing through the various phases of job training, it is in a position to arrive at a sound estimate of potential ability and special interests and skills. In addition, the training department should have the contacts and the information that will enable it to advise the employee intelligently on the courses he should take and the institution offering them in the form most advantageous to him. Using whatever psychological tests may be available and the judgments of the employee's superiors, the training department should be able to do a competent job of educational guidance. The value of technical and professional training will depend largely upon the skill with which this is done.

Training in Colleges and Technical Institutes

We have said that few training departments are equipped to take the place of the university or technical school. In most instances, then, a man must receive his basic education for a professional or technical position outside the plant. Moreover, the college or university will determine the courses and hours required for a degree or for certification. This does not mean, however, that the training department is excluded from the picture. If the student is subsidized by his employer, his training should prepare him to apply his professional or technical knowledge to that employer's needs. It is important, therefore, that the training department closely supervise the out-of-plant training, and coordinate school and university classroom instruction with in-plant training and on-the-job application.

"Cooperative training" is a device widely used by major industries throughout the country. The procedure followed is well established and uniform except for minor variations. Through a local college or university, a company arranges for special classes exclusively for employees of the company to be presented in the plant or on the campus. In this fashion it is possible to point the classroom instruction toward the specific needs of the company and toward the problems with which the students are confronted in the performance of their daily work. Arrangement of new courses, registration, the payment of tuition, the scheduling of classes, and the many other details involved in setting up the courses are usually handled within the company by the training department. To facilitate such study, many companies schedule the work assignments of students to accommodate classroom study. Research necessary for the fulfillment of degree requirements is also planned so that it makes a practical contribution to the student and to the company, and at the same time meets academic standards.

In-Plant Technical Training

Initial training of the professional student usually is directed toward some such end as the acquisition of an academic degree or certificate, or the satisfaction of certain legally or professionally determined standards. This generally means that such training must be secured in a recognized institution of learning. The training of the technician, on the other hand, has as its major aim the successful performance of a job. Academic standards and approval therefore are less important than the practicality of the training. This means that

many types of technical training can and should be given within company walls.

This training may consist of individual courses given to correct a particular employee weakness in a given field, or it may constitute a broad program designed to develop fully trained technicians. Courses and programs of this type may prepare trainees for such occupations as photographer, draftsman, surveyor, laboratory technician, radio operator, embalmer, quality control technician, job analyst, designer, practical nurse, beautician, auto mechanic, cotton classer, etc.

In-Plant Technical Training Illustrated.—An up-to-date example of the individual course, given to introduce employees to a single aspect of a technical field or to refresh trained technicians, is the course in industrial electronics outlined below:

INDUSTRIAL ELECTRONICS

Purpose

This six-weeks course, meeting twice a week, aims to provide a practical and easily understood presentation of the uses and limitations of electronics as it applies to industrial applications. While it does not aim to cover the entire field of electronics, it does provide sufficient information to give usable working knowledge to those who may be handling electronic equipment.

Outline

Discussion of Electronic Tubes

1. Harnessing the Electron
2. Electronic Tubes as Rectifiers
3. Grid Control of Electronic Tubes

Basic Electricity

4. Fundamentals of Electricity, Part I
5. Fundamentals of Electricity, Part II

Application Information

6. Electronic Relay Systems
 7. Electronic Rectifier Equipment
 8. Thy-mo-trol (Thyratron Motor Control)
 9. Electronic Control of A-C Power
 10. Electronic Frequency Changing
 11. Photoelectric Systems
 12. Electronics, Today and Tomorrow
-

Typical of the program designed to develop a fully trained technician is the course for placement interviewers presented by one of the large broadcasting companies. This course consists of three phases, each four months in duration. The first phase is designed

to orient the potential interviewer to the various jobs within the organization and to acquaint him with preliminary interviewing techniques. The second phase concentrates on placement interviewing techniques. In the third and final phase, the learner is instructed in follow-up and counseling interviewing. Throughout the course classroom instruction in techniques is combined with actual application of these techniques under the guidance of the employment manager. At the end of the year the employee should qualify as a full-time placement interviewer.

If technical or professional training is to make its full contribution, it must be integrated with the student's daily work and must give him an opportunity to use the knowledge he has acquired. "The Professional On-the-Job Training Program for Industrial Engineers," established by John A. Roebling's Sons Co., illustrates this combination of theoretical instruction with practical application. An excerpt from the outline of this course follows:

INTERMEDIATE PRINCIPLES OF TIME STUDY AND METHODS

Text Assignments: Information, skill, effort, computations, and summary.

Applied Activities: Make method and time studies of simple plant operations; make method and time studies of more complex operations; operator performance rating; summarize time study data; sketch workplace layouts and jigs.

ADVANCED TIME STUDY TRAINING

Text Assignments: Determination of standard times, allowances; allowed time; studying existing conditions; using the time study; principles of formula construction.

Applied Activities: Establish standard times from time studies; establish time allowances (fatigue, delay, etc.); review principles of various types of incentive plans; establish elementary incentive rates from time study; assist in calculation of more complex incentive plans; participate in accumulating data relative to plant equipment survey; prepare individual report of activities; solve elementary problems in production recording and administration of incentive plans; develop simple time study formulas.

A step further removed from theoretical instruction in the technical aspects of a job is the quality improvement training for employees presented by a Middle-Atlantic paper manufacturer. This course was established with the twofold purpose of (1) making the employees quality conscious, and (2) securing helpful suggestions on improving

quality from those who actually make the product. Training was conducted on a lecture-conference basis. Meetings were attended by production employees, the head of the quality control department, the production foremen and superintendents concerned, representatives from the engineering and sales departments, and union stewards. The course began with lectures on the importance of quality and the company's position in the competitive market. Results of customer surveys on product quality were fully discussed. Proper manufacturing and inspection procedures were demonstrated. Finally employee suggestions for the improvement of quality were solicited.

The company reported a striking increase in quality consciousness among employees, evidenced by tangible improvements in the quality of products produced and by the eagerness of employees to make suggestions for further improvement. Corollary benefits of the training were an increase in quantity of production and a notable reduction in waste and spoilage.

In this program, the direct on-the-job application of technical training was of greater importance and received more attention than purely theoretical classroom instruction.

Refresher Training

We have discussed the initial training of employees for technical or professional positions. Another phase, refresher training, is equally important. It is needed because professions are not static; because new discoveries, new applications, and new methods arise to challenge expert and novice alike. The man who wishes to keep abreast of his field must constantly be learning, yet there are times when the job of keeping up to date is more than one man can accomplish. Training should reduce it to more reasonable dimensions.

One way to perform this service is through the library. By buying and circulating books, magazines, and other publications, the training department can serve as a clearing house for technical and professional writing that might otherwise escape the notice of the employees who should see it. Important articles also can be digested and routed to the persons who should read them.

Occasional research studies will be so significant as to deserve special attention. When they appear, the training department will organize seminars to present and discuss them. Similarly, experts in various fields, drawn from the company or brought in from outside, will present lectures or lead discussions planned by the training department. Through these channels, through the library, seminars,

lectures, and group discussions, the training department can help professional men and technicians to keep up with the developments in their fields.

Summary

Technical and professional training can be divided into three phases: educational guidance, out-of-plant training, and in-plant training. Through the services described in these three areas, the training department can contribute substantially to the development of an effective professional and technical force, and can meet the more limited technical needs of supervisors and workers who are not primarily engaged as technicians.

CHAPTER 16

TRADE AND SEMISKILL TRAINING

Effects of Mechanization and Unit Specialization

Two significant developments have changed the occupational picture during the past two or three decades. Many jobs that were done by hand until a few years ago are now mechanized. Few occupations remain in which the skilled artisan has not been replaced by a worker who produces the same objects faster and more cheaply by the manipulation of machinery. Likewise, common labor is rapidly being supplanted by conveyor belts, mechanical hoists, lift trucks, and other substitutes for strong backs and muscular arms. Thus both the highly skilled jobs and the unskilled labor jobs have been mechanized, lessening the need for skill in the former and for physical strength in the latter.

The second development is unit specialization—the breaking down of complex jobs, formerly done by skilled workers, into relatively simple components which can be performed by less skilled employees. An extreme example of this dilution of skill is the production line, in which each worker learns and performs only a segment of the total job. A tremendous impetus to this breaking down of jobs occurred during World War II, when badly needed mass production was impeded by the lack of skilled workers.

To escape this bottleneck, many companies examined those jobs requiring the services of skilled operators and broke them down into simple components on which they could employ semiskilled workers after a brief training period. Except in companies where limited personnel makes it impossible, unit specialization in some degree will undoubtedly be continued and in some instances expanded in American industry.

These two developments have had an effect upon occupations that is of utmost importance to training. Analyzing 1940 census findings on occupations, Edwards has pointed out that the number of both skilled and unskilled workers declined steadily from 1920 to 1940, though the number of semiskilled workers increased sharply, especially after 1930. He predicts that this trend will continue, with

semiskilled workers eventually becoming the largest socio-economic group.¹

Further evidence of the same trend is found in a study of 7,955 occupations in eighty-seven industries made by the Occupational Analysis Section, United States Employment Service, from data collected between 1935 and 1941. This study revealed that, in the opinion of employers, half of all the occupations analyzed had an on-the-job training requirement of one week or less. An additional 12 per cent required one week to a month. Only 4 per cent required six months or more of training.

These data indicate the need for a re-examination of current training practices. If the bulk of the occupations in American industry today require the services of a semiskilled worker who can be trained to do his job in less than a month, then the comparative neglect of the semiskilled worker in the traditional approach to the training problem shows a lack of realism. Industries must re-evaluate their present needs, and must devote at least as much time and money to semiskill training as they have to the establishment of trade training programs. No industrial training department can pretend to be doing a complete job if the training of a great body of semiskilled employees is left to chance.

The exact nature of the job training program established by any industry will depend upon the types of jobs in that industry. It is safe to assume, however, that most companies will have occasion to employ each of the three broad types of job training now in general use. For the training of employees in skilled trades, there is the apprenticeship course. When there is a common element to many jobs being performed in the plant, or when there are many workers performing exactly the same job, vestibule training may be employed. Finally, when the learning period is short or when jobs are numerous and quite dissimilar, on-the-job training is probably the best approach. While there are innumerable variations on these three types of training, they represent the major categories. The remainder of this chapter will be devoted to a detailed examination of each of these types.

Apprentice Training

Long before anyone thought of formal, organized training in industry, apprenticeship was well established. Young boys had for centuries attached themselves to master craftsmen and artisans to

¹ Alba M. Edwards, *Population: Comparative Occupational Statistics for the United States, 1870 to 1940*, Washington, U. S. Government Printing Office, 1943.

learn the mysteries of bench, forge, or machine. This system required the apprentice to bind himself to the master for a designated period of time; in return for his services and usually for an established fee in addition, the apprentice was taught his trade. Basically the system is the same today. The element of servitude has been eliminated, but apprentices today continue to bind themselves by contract to a company which promises to teach them a trade.

The fields in which apprentice training is offered are numerous. Most large industries offer courses leading to such jobs as sheet metal worker, tool designer, toolmaker, heat treater, machinist, molder, patternmaker, pipe fitter, plumber, boilermaker, draftsman, and electrician. The United States Navy has an apprentice training program which, in addition to most of the trades named above, prepares men for the jobs of auto mechanic, blacksmith, boatbuilder, coppersmith, instrument maker, joiner, painter, welder, and a number of others related to shipbuilding and aircraft maintenance.

Apprentice training differs from other types of job training primarily in the degree of skill and knowledge required in the trade and the consequent length of the course. Most apprenticeships last four years and combine shop practice of skills with classroom training in related theory. It is largely this related classroom training that determines whether the apprentice, at the end of his course, will be only a skilled machinist, or will have progressed beyond that point to become a technician in one of the many allied fields.

Long-range apprenticeship programs have been established by companies that employ enough craftsmen to make the procedure economical. For the smaller company, or for the organization whose need for craftsmen is limited to a small maintenance crew, there are two alternatives to the completely company-operated program. The first of these is the so-called cooperative program, wherein shop practice is handled on the job under the direction of a skilled craftsman, while the classroom instruction is given in a local trade school or college. Obviously this system permits less control of the apprentice and may provide less satisfactory on-the-job instruction, but it will accomplish the development of skilled men. The other alternative is to delegate the entire problem of training to the trade school or college. This actually is not true apprenticeship, but it may be the only practical method for small companies, aside from the outright hiring of men who are already skilled in their craft.

Vestibule Training

During World War II, many companies established vestibule classes in such operations as packing, simple inspection, or the operation of a single machine. Immediately after being hired, new employees were placed in the vestibule school and were there taught the fundamentals of the job they were to perform in the production department or office. In this fashion it was possible to assure uniform instruction in the one best way of doing the job.

Vestibule training, as the term is used here, refers to job training which is shorter than apprenticeship courses and is given in a regularly established school rather than on the production line. Such training may range in duration from two or three days to several months. Its greatest difference from apprentice training is that it is designed to equip the learner to handle one phase of a trade, to operate one machine, or to perform a relatively simple manual operation. It is most commonly done by setting up a facsimile or miniature of the real office or plant situation so that the trainee can practice those skills which he will later use on the job.

Vestibule training, where it approaches skilled operations, may involve related theoretical instruction. Many of the manufacturers of machines and tools, for example, have found it desirable to break down trades by the process of unit specialization and to train workers in the theory and practice of limited operations. In such cases the vestibule course probably will include such related subjects as shop mathematics, blueprint reading, and mechanical drawing.

The advantages of vestibule training are numerous. In the first place, the situation can be controlled more completely than it can on the job. Moreover, none of the everyday headaches and heartaches of the plant or office affect the learner. He is free to concentrate on the mastery of a new skill in an environment conducive to learning and under the guidance of an instructor who has the ability, the willingness, and the time to see that he knows the job, and who can help to overcome the worker's initial uncertainty before he is turned loose on his own.

If many jobs in the plant require the same basic knowledge or skill, it is most efficient to set up a single vestibule class and to utilize the full time of one instructor rather than the time and the questionable talents of many part-time instructors in the various departments. When the job skill requirements for many departments are identical or closely related, failure to establish a central staff training unit is as unsound as it would be to permit each small unit

within a company to do its own purchasing or to maintain an autonomous accounting department.

Vestibule training, then, is similar to apprentice training in this respect: it is accomplished through staff or line instructors, usually in a separate workroom rather than on the production line or in the office. The learner is paid an established minimum rate while he is in training, and, in most instances, is not expected to perform productive work. Vestibule training is also similar to on-the-job training in that it is concerned with the development of less complex skills and is therefore shorter than the customary apprentice course.

On-the-Job Training

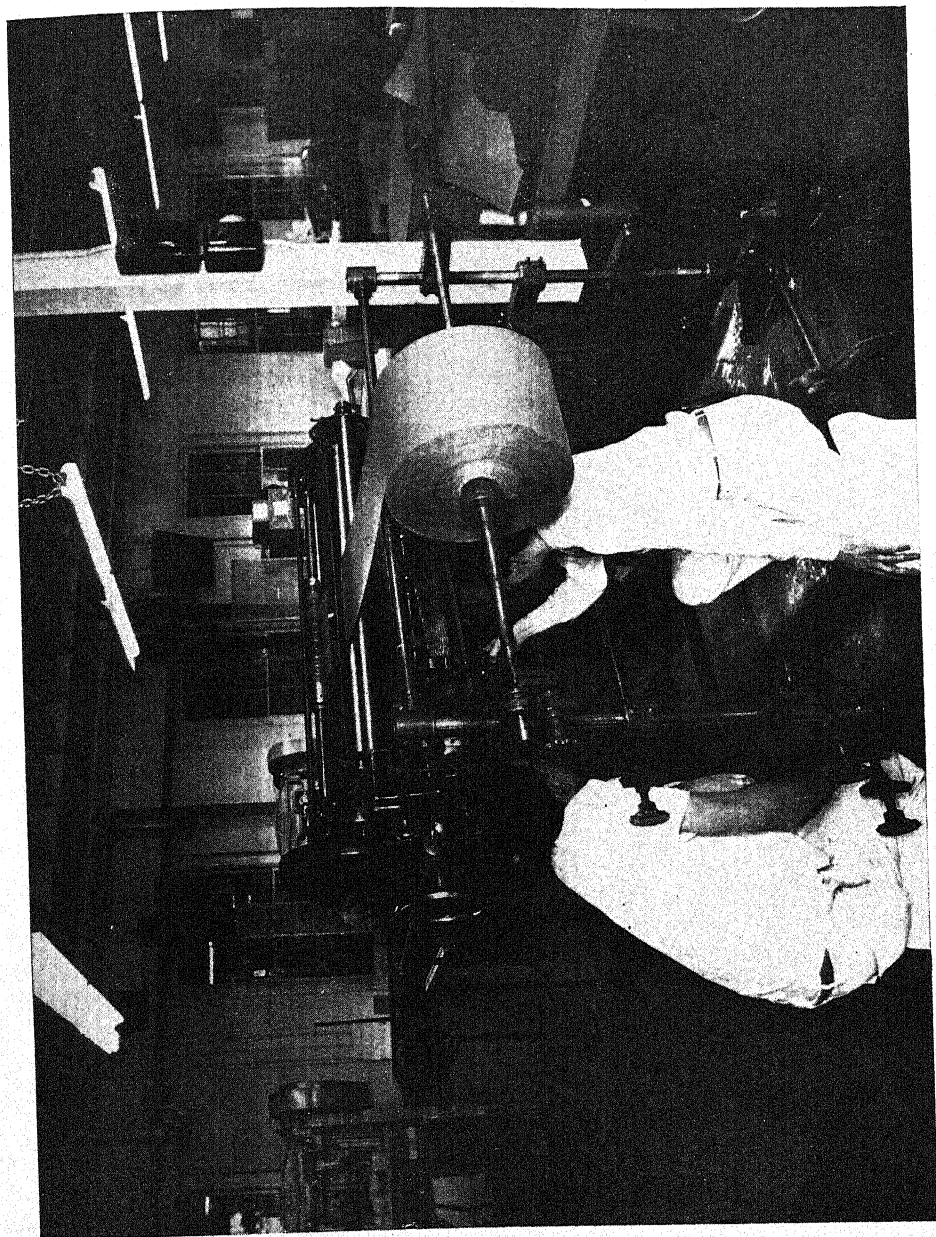
The third general approach to job training is to instruct new or transferred employees on the production line, behind the counter, or in the office, instead of in a classroom or school. This method of training is usually employed where jobs are too varied to permit the establishment of group instruction or where the machinery involved in the job cannot be duplicated profitably in a training school shop. It would be fantastic, for example, to propose that a paper manufacturer set aside a half-million-dollar paper machine on which learners may practice. It is also impractical to set up a vestibule school in a company where there are almost as many different jobs as there are employees. Under these circumstances the only reasonable alternative is on-the-job training.

On-the-Job Training Program Illustrated.—So haphazard have on-the-job training procedures been in many companies that a detailed description of the procedure involved in a sound program appears warranted. With minor adaptations, the procedure outlined below can be applied in any situation where on-the-job training is required.

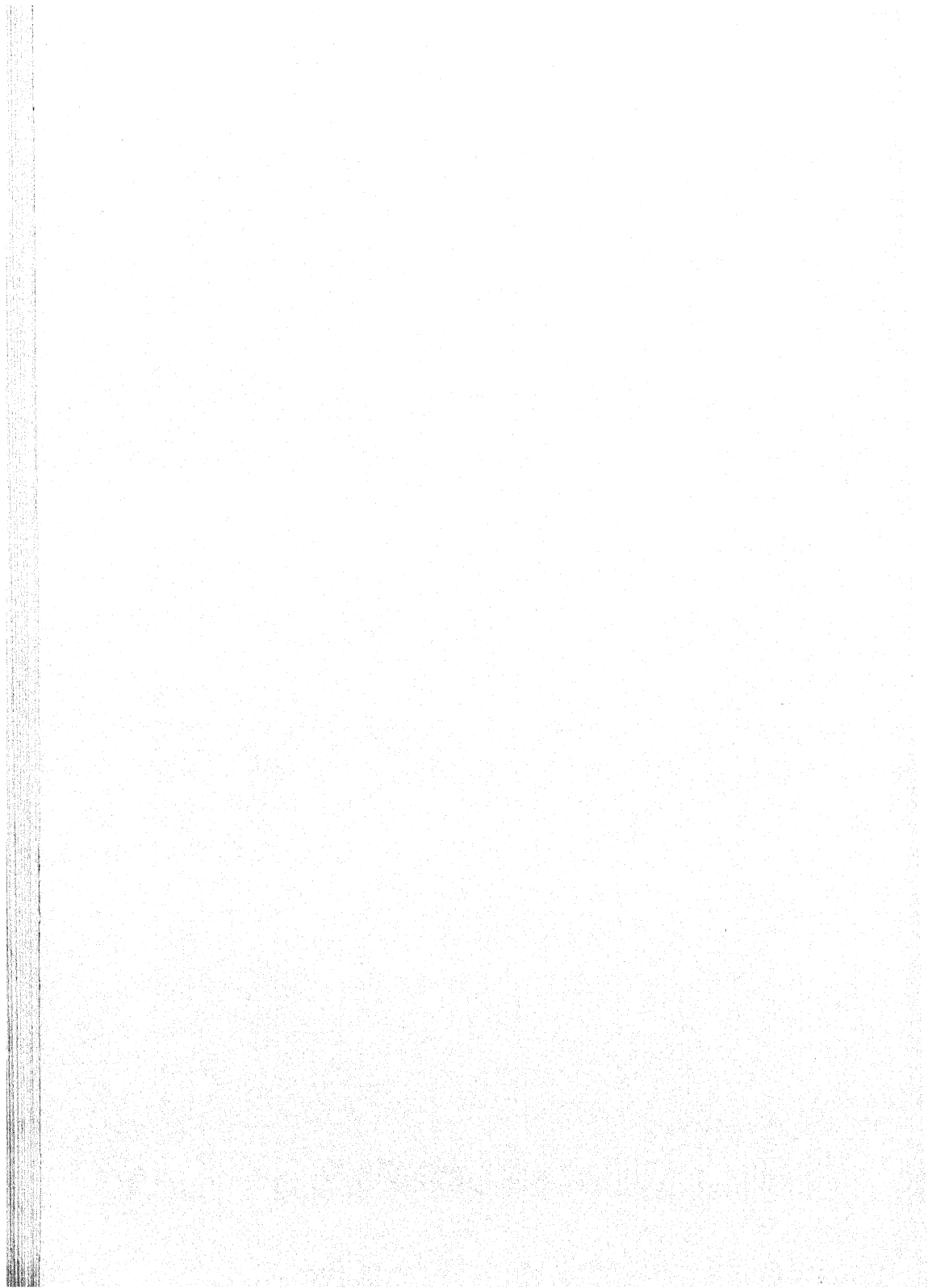
PROCEDURE FOR ON-THE-JOB TRAINING

After induction to the department, the new or transferred employee should be assigned immediately to an instructor for job training. His training should be done only by this person. Confusion will result from the switching of instructors or from permitting unauthorized persons to advise, direct, and instruct the new employee.

Training should continue until such time as it is evident that the new employee has mastered the job procedure. After this, the instructor should taper off instruction and supervision. However, some follow-up



Form 12. Job Training



training should continue until the new employee is able to make out on the job.

A. *Who Should Be Trained?*

On-the-job training is designed to accomplish two general objectives: (1) the job instruction of newly hired employees or of employees who have been transferred from other departments or from another job within the department, and (2) the training of employees who need correction or improvement in the jobs they are currently performing.

B. *Who Should Do the Training?*

Training should be done only by regular instructors selected from among the workers or first-level supervisors in the department. This selection should be made by the department head, assisted by the training department.

1. BASIS OF SELECTION OF TRAINER

Selection should be made on the basis of (a) job knowledge and skill, (b) willingness to impart information, (c) enthusiasm for quality workmanship, (d) ability to think and to express ideas clearly and logically, (e) ability to inspire confidence in others, (f) ability to understand and sympathize with the new worker's point of view, (g) ability to establish quickly a friendly relationship with others, (h) loyalty to the company and the department based on an understanding of the principles and objectives of both, and (i) ability to use the above knowledges and attitudes to help employees reach and maintain peak production with the least amount of discomfort to themselves or others.

2. PAY

Instructors (with the exception of salaried supervisory personnel) should receive extra compensation for time spent in training activities. This compensation may take the form of a special instructor's rate or it may be a bonus added to the instructor's regular job rate.

3. DUTIES AND AUTHORITY OF INSTRUCTORS

Employees who are selected to be instructors remain under the direct supervision of the first-level supervisor. It is the duty of the supervisor to supervise the instruction, to see that the standard method is being taught, that quality standards are being met, and that the instructor is using proper instructional techniques. Supervisors should be prepared for this responsibility as a part of the regular supervisor training program.

It is the duty of the instructor to (a) prepare job breakdowns subject

to the approval of the supervisor, (b) prepare necessary equipment and materials, (c) present the instruction according to established techniques, (d) observe the new employee's performance, and (e) check frequently to insure maximum progress on the part of the new employee.

Instructors must give to the training job all the time that is necessary to insure satisfactory results as determined by established performance standards and learning times. On those occasions when a specific training assignment has been made, it must take precedence over production demands. However, instructors should carry out their training function only upon assignment by the supervisor.

C. How Should the Training Be Done?

1. TRAINING OF INSTRUCTORS

All instructors must receive training in teaching methods before they are given training assignments. If the training program is to be effective, instruction must be uniform and in accordance with the principles of good teaching.

2. STEPS IN TEACHING

Each instructor should follow the steps outlined below:

Step 1. Break Down the Job. The instructor should have an operations sheet for each job that he will be required to teach. These operations sheets are intended to serve as an outline or guide to the instructor in his or her teaching. They are a supplement to instruction, not a substitute for it. They should contain (a) a detailed description of each step in the operation, (b) any key points that a new employee should be taught, (c) quality specifications for the operation in so far as they concern the employee, (d) safety factors, and (e) instructions for care of any machines involved.

If it appears desirable, some elements of the operations sheets, such as safety factors and machine care instructions, may be duplicated in a handy form and given to the new employee as a permanent reference.

Step 2. Prepare the Workplace. An important phase of every job is the housekeeping that is involved. To establish first impressions that will assure good work habits on the part of all new employees, the instructor should present a constant example of neatness and order.

Machines and work area should be properly cleaned and cared for before instruction. Necessary equipment and material must be on hand and in the proper place. In some cases a formal layout of the work space should be drawn up and the employee should be taught the one and

only layout of his tools, equipment, and work. No unnecessary material, equipment, tote boxes, personal belongings, etc., should be kept at the workplace. New employees must be trained in good housekeeping and must be convinced that neatness of person and workplace is an integral part of the job—one for which they are being paid.

Step 3. Instruct the New Employee. The new employee should be trained by the instructor in accordance with the following procedure:

(a) Prepare the Worker—

Since learning takes place best and most quickly when the worker is not tense and frightened because of the job and the new surroundings, the instructor should make every effort to put the learner at ease.

The instructor should endeavor to interest the learner in the job by showing its importance in relation to the finished product, the advantages of the job to the employee, the possibilities for self-improvement, etc.

The instructor should discover, by observation and questioning, how much familiarity with the job the new employee has. Without this information, the instructor will not be able to adapt the instruction to the needs of the individual learner.

(b) Present the Operation—

It is essential that the instructor adhere closely to the recommended procedure in this step.

Working from the operations sheet and clearly developing one step at a time, the instructor should tell and show the new employee how to do the job, stressing key points, knacks, quality standards, and safety precautions. This step should be repeated as the complexity of the operation indicates. Next, the instructor should perform the job while the learner tells him what to do in each step. Here the instructor should discover any points on which the learner is weak or confused, and take care of them at once.

(c) Have the Worker Perform—

When the instructor is sure that the learner has mastered the steps and key points, he should have the learner perform the job, stopping him only when a mistake is made. Finally the instructor should have the learner perform the job, explaining what he is doing and why. This step should be repeated until the instructor is sure that the new employee has mastered the details of the job.

(d) Follow Up the Instruction—

After this initial training, the instructor should make himself available to the learner at any time that questions arise and should insist that the learner come to him and no one else for help. In addition, the instructor should check with the learner at regular intervals (every hour or two the first week and with decreasing frequency thereafter) until the learner is able to do the job effectively alone.

A major purpose of the follow-up is to maintain standard procedures. It is assumed that one best method has been determined for each job. It is this method that has been described in the operations sheet and has been taught to the new employees. Instructors should insist that this method be followed without deviation until such time as a change of method has been approved by the supervisor and has been put in writing to replace the original operations sheet. This rigid adherence to standard procedure is absolutely essential to the success of the training program.

D. What Is the Function of Line Supervisors in On-the-Job Training?

As has been stated, the first-line supervisor is responsible for the supervision of instructors and the maintenance of high quality training. While he may not have to do much actual training, the success of training in the department will depend upon his supervision.

More specifically, the supervisor has the following training responsibilities:

1. SUPERVISION OF INSTRUCTORS

No training program is any better than those doing the training. The supervisor must make certain that instructors are employing the prescribed teaching techniques and that they are teaching the jobs as described in the operations sheets. Each supervisor should make at least a monthly observation of the instructors under his supervision and should record his criticisms and suggestions for improvement. This observation should be followed by a private conference with each instructor in which recommendations are discussed. The object of these observations and conferences should be to reinforce the instructional training already received.

2. ASSIGNMENT OF TRAINING JOBS TO INSTRUCTORS

The supervisor must determine which instructor is best fitted to teach any particular job. He must assign to the selected instructor any new employee who is to be trained for this particular job. In addition, he

must make certain that no other person advises or instructs the same new employee in the same job unless the instructor is absent from work and a substitute is designated. Duplication of teaching effort leads to confusion, overlapping, perhaps contradiction, and certainly wasted time and money.

3. SUPERVISION OF QUALITY STANDARDS

The supervisor, assisted in some organizations by the quality control inspector, must ascertain that new employees are being taught the proper quality specifications and that their work measures up to these standards. It is the duty of the instructor to teach these standards, but ultimate responsibility for checking is the supervisor's.

4. TECHNIQUE OF SUPERVISION

Although the instructor normally has no supervisory authority, while he is training a new employee he is, in effect, acting in a supervisory capacity. To assist him in carrying out his responsibilities and in maintaining the respect and compliance of the learner, the supervisor should do nothing that will destroy this impression of authority. If the instructor is guilty of any errors in instruction or even of any overstepping of authority, the supervisor should correct or reprimand the instructor privately and in such a fashion as to cause the instructor no loss of prestige or authority.

Instructors who are consistently guilty of the breaches cited above and who do not respond to corrective effort should be replaced after they have been shown the justice of such action. Since the original selection of instructors has been made with care, such extreme action should seldom be necessary. Too frequent turnover among instructors will weaken and eventually destroy the training.

E. What Is the Function of the Training Department in On-the-Job Training?

It has been indicated that primary responsibility for maintenance of the on-the-job training program rests with the supervisors in the department. They must make a wise selection of instructors, must regulate the assignment of new employees to the proper instructors, and must supervise to maintain a high quality of instruction in a continuing program.

At the same time, the training department has these definite responsibilities in connection with the operator training program.

1. The training department should prepare the instructors for the training job for which they have been selected.

2. The training department should set up additional training for instructors upon request from the line supervisor. This training may be designed to meet new training problems that arise, or to improve and correct substandard performance of current instructors.

3. The training department, in order to discharge its obligation to the management of the department and to insure high-quality instruction, should make frequent inspections of instruction and should submit to the department head suggestions and criticism arising from this observation.

4. The training department should conduct refresher courses in standards and job instruction methods for all instructors at three- to six-month intervals. The object of these courses is to keep instructors aware of correct methods and to overcome the forgetting that may accompany limited use during any three-month period.

Measuring and Controlling the Progress of Training: The Learning Curve

Trade and semiskill training of the kind described in this chapter lends itself to objective evaluation and control more readily than does almost any other type of business or industrial education. Tangible evidences of the results of systematic and organized training in job skills are numerous. Increased production, waste reduction, quality improvement, reduction of spoilage, or reduction of learning time all reflect, and may be accurately related to, job training.

One of the most effective measures of the success or failure of job training is the learning time required by workers to arrive at job proficiency. Time spent in training generally is less productive than the time of the fully trained worker; during this period the learner is expected to master the skills and the facts of his job, not to equal the productive output of an experienced employee. Since this is the case, any reduction in learning time consistent with optimum training results constitutes a saving. The faster an employee can reach and maintain standard production, the more valuable he is and the more effective his training has been.

There are two widely employed approaches to the determination of learning time. The first and most common approach follows the rule of thumb: on the basis of experience, supervisors estimate how long it should take an employee to learn a job. Such guesses are notoriously inexact.

The second approach is more precise. Learning progress in terms of units produced per hour or per day is recorded for a number of employees. From these progress records a typical learning curve

is established for each job. This shows how long it should take the average learner to reach standard production and approximately what level of performance should be expected of him at any time during his learning period.

While the second method is far better than the first, it may result in error unless the learning situation is carefully controlled. Learning times established in the absence of a sound program of job training do not represent optimum goals.

A survey of production records of learners recently made by the writers serves to illustrate this point. The object of the survey was to establish valid learning times for all jobs in one production department which already had set up learning periods based on supervisors' guesses. On one machine job, for example, the learning period had been set at six weeks. The production records of employees who had learned the job during the preceding year indicated that the average learning time was actually four weeks. A learning curve was set up, therefore, using the four-week period as the standard.

At this point, on-the-job training was introduced into the department. New employees were trained under a carefully developed and administered program. Employees who were guided and assisted in their learning by a trained instructor, working according to a carefully prepared plan, not only reached the production standard faster than unguided learners, but also continued to improve their performance beyond this point.

From the data on learning progress accumulated under such a controlled situation, it is possible to set up a typical learning curve for each job or operation. Comparison of a learner's performance with this curve shows that his training should be intensified or, in the event that he lags significantly behind the average progress levels, that he should be transferred to some other job for which he might be better suited. Such records have the added advantage of showing the learner how he is progressing with reference to established standards.

Job Training Involves More Than Motor Skills

There is one aspect of job training that is given scant attention, although it is equal in importance to the development of mechanical skills. This neglected area is the deliberate development of desirable employee attitudes and of the will to work that must be present if skill is to have any real value.

Companies which support job training programs frequently assume that the learner will acquire the desired work and social attitudes as a result of exposure to his instructors and fellow workers. Such an assumption is more hopeful than realistic. Instead of depending upon chance for such a necessary aspect of training, alert companies now deliberately include broad, general social aspects of industry as a part of their regular job training.

The new employee represents a considerable investment to the company that trains him and plans to use his services. No economy-minded management should permit this investment to be wasted because an effort is not made to see that he acquires, along with his job knowledge, the will to work efficiently for a company he understands and likes.

Summary

Traditionally, trade and apprentice training have been the major concern of industrial trainers. Even today many companies that profess to have a complete job training program are referring to nothing more extensive than an apprenticeship program covering only a small number of the specialized skills found in the business. Obviously, the field of job training is infinitely broader than the exclusive development of trade skills. Job training must be extended beyond this limited concept if business and industry are to meet the new demands created by the increased numbers of the semiskilled workers. Unless the vast numbers of semiskilled workers—the clerks, elevator operators, waitresses, material handlers, and chambermaids—are to be allowed to learn by the costly, ineffectual, trial-and-error method, job training must be reinterpreted and expanded to provide controlled learning experiences for all employees on all skill levels.

CHAPTER 17

OFFICE AND BUSINESS TRAINING

The basic principles and techniques of training are the same for both office and production employees. The problems involved in training an employee to understand, accept, and practice what he is taught are the same, regardless of whether the subject taught is accounting, transcription, quality control, conveyor line operation, or company loyalty. There are, however, certain differences between office and factory people, and between office and factory work; and if office training is to be effective, these differences must be recognized. The first purpose of this chapter, therefore, is to analyze office workers and their work and working conditions in order to find distinctive characteristics significant enough to merit consideration from training men. After a few major differences are described, this chapter will recommend ways and means for adapting a training program to the needs and interests of office personnel.

Characteristics of Office Work and Workers

1. A major characteristic of the office worker is that he usually has finished high school and in most cases has taken some sort of advanced training. When he enters the training classroom, he is already familiar with teaching and classroom procedure. Consequently he will have established critical standards against which to judge the teaching performance. He will not prize the attainment of credit and the completion of the course as highly as he will value the benefits obtained from the training. Moreover, even though the course may contain information of value to him, he will be severely critical of careless or superficial teaching. Therefore, if training is to meet the high standards of the office worker, the teaching must be carefully planned, effectively presented, and regularly supervised.

2. Office workers, both on and off the job, are subject to many influences which tend to build their attitudes of belonging, prestige, and security. In the early days of industrial expansion society and custom clothed the office position with respect and dignity. Holding a desk job implied that one possessed sufficient intelligence to avoid the burden of heavy physical labor which was then characteristic of

most factory work. When a man went from the factory to the desk, he was the object of envy, for he had taken the first and most common step on the path to success. Women in those days associated office jobs with their newly gained freedom; eager to become self-supporting professional women, they sought office employment and wore their jobs proudly as a mark of their new status.

In many respects these influences have continued. Office employees dress better on the job than factory workers, and are usually provided with cleaner and more comfortable workplaces. Because of these superior working conditions, a sense of dignity, pride, and status is developed. Moreover, office workers usually require more pre-employment technical training than those seeking positions with comparable pay elsewhere; possessing such skills, they take pride in thinking of themselves as technicians and, perhaps wishfully, as professionals. Another factor is the knowledge that office workers have of important company plans and activities; secretaries and even clerks and typists have access to major plans and projects of which persons outside the office are only vaguely aware. For all these reasons the office worker develops a sense of importance, status, and position that other employees lack.

To training men these attitudes indicate that office workers may be somewhat independent and ambitious, and that less time need be spent in preparing them to receive training. The office worker is less likely to feel that an invitation to attend training classes implies some criticism of his work or threat to his security. To a greater degree than is true with the production worker, he is prepared to accept training as a normal procedure—even as his just due—and to participate in it freely and fully from the outset. Since this is the case, instruction may be directed to the development of the particular understanding, attitude, or skill needed at the moment.

3. Most office workers identify themselves more closely with management than do production employees. In part this identification is a direct product of the work environment of these office employees. Like the boss, they work in an office rather than in the shop. Like him, they do not wear uniforms or overalls. Moreover, office workers are generally closer to management activities and decisions. They are “in the know” or so close to the fringe of real information that they feel informed. It is easy for them, therefore, to consider themselves part of the moving force of the company. This feeling is sometimes so pronounced that they regard the production employees as outsiders. The tendency toward more complete unionization of pro-

duction employees, by widening the gap between plant and office workers, has helped to bring about the closer identification of the latter with management. Furthermore, the methods of pay, vacation determination, and sick leave compensation, and a host of other procedures are essentially the same for the office worker and the manager.

The second major factor in bringing about the identification of office workers with management is largely historical. The Horatio Alger concept is firmly imbedded in American tradition. It is a widespread belief that the office boy may very well get to be president of his company. Moreover, the progression to the throne seems to have been described in terms of a hierarchy of white collar positions. Whether or not this belief is realistic, it still persists, and there are probably few office workers who do not imagine their future in terms of some supervisory or executive position. Thus it is only natural that office workers should begin early to align themselves with the management group.

This identification smooths the path of training considerably. It means that the company's point of view is partly sold before training begins. It means further that office workers can be invited more quickly into an examination of the company's projects and problems without a great deal of preliminary spadework to overcome indifference or active hostility.

It is extremely important too that through training every effort be made to intensify this feeling of identification. Office workers must be offered every opportunity to know their company, to discuss its problems, to participate as fully as possible in the solution of its problems so that the identification becomes a reality. A failure to keep office workers well informed, to invite their suggestions, to talk openly with them, can lead them even more readily than production employees to disillusionment and disgust.

4. Office workers and supervisors may be a little less democratic than other employees. Office practices are usually bureaucratic and traditionalized, and where red tape exists the freedom to question and to suggest is likely to be restricted. Since position and status are so important in offices, it is only natural that some supervisors will use the authority of their position to compel attention and unquestioned obedience. Another reason for the so-called white-collar attitude is that office workers, being in a sense trained specialists, are not inclined to seek and rely upon suggestions from colleagues and subordinates. If office training is to be effective, teachers must

recognize the existence of these attitudes and plan a program that will lead to broader visions, understanding, and teamwork.

5. Office work in general lends itself less readily to precise measurement and control than does the work of production units. This is true for several reasons. In the first place, except in relatively few jobs and in very large offices, the work is not performed according to the same sort of carefully prescribed schedule that governs every production operation. Certain routines exist, but they are of minor significance. Day after day manager, clerk, and stenographer are subject to the vagaries of the business situation. The work pace is erratic. Today's lull is followed tomorrow by the tempest of a month-end closing. A sudden and unexpected price change can throw all the usual routine out the window and substitute pandemonium. Thumb-twiddling and a hectic overtime rush can occur in the same week—even in the same day.

A corollary of this irregular work schedule is the absence in office work of machine pacing. In a production operation, workers may be impelled to meet schedules either because they are working on an incentive system which has its foundation in time study, or because compliance with a schedule is dictated to them by an assembly line setup. In an office this condition does not exist. Generally, the office employee himself decides how much time any job will take. The boss cannot be constantly at his shoulder checking on this self-imposed time limit. Moreover, the units of work in most office situations are extremely variable. A short telephone call may complete one assignment, but a ten-page report may be required for the next one. Under these conditions unit measurement becomes an impractical task. Finally, the office supervisor has less time for supervision than does the typical production supervisor because he has a full-time job to perform himself. In most organizations the chief accountant, the senior cost accountant, the traffic manager, or the payroll supervisor must devote a major share of his time to the performance of specifically assigned functions other than supervision. Consequently he is able to devote much less time than the production supervisor to the measurement and control of the activities of his subordinates.

Since this relative absence of control exists up and down the organization ladder in most office units, since there is basic resistance on the part of office personnel to the sort of control exemplified by time study, it is particularly important that the will to work effectively and loyally be developed in office employees. If any degree of efficiency is to be maintained in this field, initiative and self-discipline are absolute necessities. In the training of office workers, therefore,

the development of these characteristics becomes a matter of paramount importance.

Keeping in mind these five basic differences between office and production workers, we may next look at specific types of training and discover what effect these differences will have on the training of office workers in each of these types.

Orientation Training for Office Employees

The basic principles and techniques as presented in Chapter 12 also apply to the orientation of office workers. But since there are personal and temperamental differences between office and shop workers, and differences between office and factory skills and between the physical conditions under which the work is performed, the orientation teacher should recognize these differences and adapt his instruction to salaried and office personnel.

1. Office workers, particularly those in industry, are frequently guilty of a kind of provincialism that grows out of their insulation from the production units. Differences in location and hours of work may keep office employees from any real knowledge of what goes on in the shop. They seldom visit the other departments of the plant, and in their daily lives they rarely have the opportunity to see warehouses, foundries, and assembly lines in operation. This unfamiliarity presents an immediate obstacle to the building of a team or family spirit embracing the entire organization. It also has an unfortunate effect on the accuracy and practicality of everyday work judgments. The accountant who has never seen the operation for which he is collecting cost data can make mistakes which appear idiotic to production men. Office workers in the payroll, traffic, or credit department cannot be fully competent in their jobs if the production units they are servicing remain a mystery to them. Therefore, in addition to the regular devices of orientation, the training department should conduct tours which are planned to point out evidences of mutual interest between the office and the shop.

2. Office workers are likely to be interested in and therefore influenced by the status of the organization employing them. They relish the stature that they gain from working for a company that is nationally or internationally known for its management, product, or service. Orientation should play up to this interest by providing an abundance of status-building information. In the case of a small concern without national reputation, this may mean that considerable attention should be given to emphasizing the importance or quality

of the product or service within its limited scope. Attention may also be directed to the importance of the company in the economic and social life of the immediate community.

3. Office workers may be more interested than production employees in the organization of the company. Again status is probably the governing reason. Office workers generally give more importance to titles and are more interested in knowing about them. Through frequent contacts by phone and memorandum they probably have practical use for such instruction.

4. Office workers, being a little better trained than production employees and closer in their work to economic and financial affairs, may require a more intensive presentation of the financial statement, company profit, and its distribution. Thus, instruction in economic subjects may be somewhat advanced.

5. Office workers have shorter working hours than production employees and are accustomed to play and rest more frequently. Consequently the company recreation and service program may mean more to them. If the program is well presented, heavy participation may come from office workers.

The orientation of production workers is a generally accepted practice among companies that have training programs. Unfortunately, however, some administrators have failed to recognize that office personnel also need similar orientation. These administrators have become so accustomed to the loyalty and cooperation of office workers that they have come to take these attitudes for granted. They do not realize that even the finest team needs an occasional pep talk. Being sympathetic to management and less militantly interested in economic rewards for their labor, office workers are likely to respond enthusiastically to all the presentations made in orientation. The wise management will see to it that this opportunity for enthusiastic participation and approval is made available to all its employees.

Illustrative of the type of office worker orientation that is being done in a few alert organizations is the program of home office visits utilized by one large industry.¹ Under this plan, secretaries of executive personnel attend a two-day training period at the company's main office. During this time these secretaries are given background information on the company. They discuss home office procedures, company policies, and the manufacture and distribution of products. The aim of this training is to help the secretaries to understand the operation of the company as a whole and broaden their vision beyond

¹ "Home Office Visits Part of Training Programs," *Supervision*, July, 1947.

the confines of their own department. The need for this increased breadth of vision exists for all office workers.

Training of Office Supervisors

Throughout this book supervisor training has been thought of as consisting of training in orientation, technical skills, management skills, and human relations skills. A few specific hints and an illustration for applying the previous teachings to office supervisors follow.

1. Supervisor training for office groups should stress the concept that the supervisor is the one who gets out the work, not the one who does it. The supervisor should be trained to understand and to perform all his duties—his responsibility for handling grievances as well as for preventing them, the relation of his actions to the morale of his group, and his responsibility to maintain and build morale. The office supervisor must be taught to see himself as the manager of a team of men and women who, if properly led, will satisfactorily perform the work for him. He must be led to appreciate the need for, and to know the means of, developing his work force first as productive individuals and then as a cooperative team. In training office supervisors the training department must emphasize the concept that there is far more to supervision than clerical, accounting, or other technical competence.

2. In a limited amount of time training will have to provide the office supervisor, who is busy with a full-time job in credit, payroll, or costs, with short cuts and devices which will make possible the performance of the supervisory job described above.

3. Most office supervisors, being specialists, are likely to look at the total area of training in terms of their own limited field. There may be less cohesion among the unit and division heads of an office than among a group of production supervisors whose problems of men, machines, and materials are similar. For this reason more effort must be devoted to helping office supervisors see and understand each other's problems and to developing tolerance and active cooperation among them.

4. Training needs for a group of office supervisors should be more individualized. Whereas a group of production supervisors, recognizing the similarity in their work and their problems, may discuss the giving of orders and directions freely and cooperatively, the accounts receivable supervisor is likely to think of his work and his problems as being different from those of the stationery stores supervisor. Where broad generalizations or principles are taught in

supervisor training, the instructor must make sure that each of the different section or unit heads realizes that the teaching applies directly to him and his unit.

5. Since office employees are usually familiar with both skill training (typing, filing, comptometer operation) and technical training (traffic, accounting, inventory control, and office management) they may accept new or refresher training in these areas more willingly than in supervisory or orientation training. If training is being offered for the first time, or if resistance is expected, perhaps the program should start with technical or skill training.

6. It may be necessary to schedule supervisor training for office supervisors after working hours. If they are taken from their jobs for training, they may be swamped with accumulated work when they go back. Training may, therefore, attain an unpopularity which it does not deserve.

An illustration of how a conference can be weighted to meet the needs of office supervisors is a series given in a large office where the full program included conferences on principles of industrial organization, planning, human relations, control, and communication. The objective of the first conference was to develop in section and unit heads an awareness that they are members of a growing profession—the profession of management, supervision, and administration. As such they must realize what the job of supervision involves—the provision of adequate working facilities and the maintenance of simple controls and of cooperative relationships with those beneath, above, and on the same level. They must see that it includes planning, scheduling, training, and a host of other details incident to full production and employee satisfaction. This conference endeavored to sketch out the full job of the modern supervisor and to define the role which management expects its supervisors to play. Throughout the session, efforts were made to stimulate in the supervisor an enthusiasm for his job and to create a realization of what is involved above and beyond technical knowledge and skill. This conference tried to create a desire in office supervisors to know more about planning, commanding, controlling, and improving—the nontechnical areas of supervision with which the subsequent sessions of the course dealt. After seeing the full job expected of him, after being introduced to the tools, techniques, and principles of scientific management, it was expected that the office supervisor would want to add to his job and technical skill those things which might help him to see his full responsibilities and to assume them successfully.

Technical and Professional Training of Office Workers

Of the types of training discussed in this chapter, the adaptation of technical and professional training to office needs requires least attention. This is true for two reasons. First, it is the area in which office personnel are already most fully trained either prior to employment or on the specific job. In the second place, most technical and professional training of office workers is done outside the company through correspondence courses or local schools and colleges. The training director, therefore, is not in a position to do much about adapting this training to office needs.

There are, however, a few minor hints which may be of assistance in planning this type of training.

1. A greater reliance may have to be placed upon out-of-plant training courses. There are likely to be just a few employees engaged in a particular technical or professional area of office work. The training director, unable to develop specialized courses for these few employees, may turn to courses offered in correspondence schools, night schools, or university extension classes. The greater independence and more extensive educational background of most office workers should help to make this approach successful.

2. Office workers, in proportion to their numbers, make greater use of outside training facilities than do production workers. Therefore, a company that sets up a tuition refund program should expect the bulk of this fund to go to office personnel. Since most of their training must be done outside the company, this apparently unequal distribution is normal and should even be encouraged.

3. Because of their academic background and their desire for self-improvement, office workers, if encouraged, will do extensive outside reading along technical and professional lines. The training director can capitalize on this interest by maintaining an adequate, up-to-date library and by advertising it and promoting its use, especially by office workers.

4. In giving educational or vocational guidance to business people, the training man must seek to prepare his work force not only in their own specialty but in related fields as well. Where the direct way to the top is blocked for a young and able worker by an equally young and able superior, a lateral transfer may be in order. To provide for this situation, cross training is desirable. A good training man will attain flexibility in his work force and maximum use of the ability of his trainees by seeing that his office force does not become too narrowly specialized, especially in a small office. This means that he

must study the organization to see where jobs are likely to become open, and that he must decide who has the present or potential ability to fill them. He must find men and women who are qualified for advancement but who have been delayed in their progress through no fault of their own. For these employees he must plan cross training.

Trade and Semiskill Training for Office Workers

The principles and techniques involved in this level of job training were fully discussed in Chapter 16. In general, the advice given in that chapter applies equally well in the training of office employees. There are, however, two factors inherent in the office situation that will influence any job training done there.

In the first place, office workers usually possess sufficient skill to meet initial job requirements. They know how to type, how to take dictation and transcribe shorthand, how to operate various machines. Their primary need, therefore, is for remedial training, upgrade training, or for training designed to adapt their basic knowledge and skills to the special requirements of the company or the job where they are employed.

The training program for office workers in the Veterans Administration includes units which illustrate how this primary need can be met. The first two units can be adapted to a remedial or upgrading office training program.

UNIT 1

REMEDIAL TYPING

Description. With the aid of a training specialist, the inaccurate typist discovers which bad typing habits may be causing the high percentage of unacceptable work due to errors, too many erasures, uneven printing, fatigue, etc. The slow typist discovers what is causing her low typing speed. After the bad habits are recognized by both typist and specialist, corrective drills are prescribed and carried out under the direction of the training specialist. Periodically, writings are timed and analyzed by both the typist and the specialist to determine whether or not the corrective drills are resulting in improved work—fast, accurate, and neat. Training time varies with need—may extend to ten 90-minute sessions.

UNIT 2

SHORTHAND SPEED

Description. This unit provides an opportunity for the stenographer who has a thorough background in shorthand theory to increase her writing speed. The first sessions include dictations on simple material at less than average dictation speed. Gradually the dictation speed, along

with the difficulty of the material, is increased until the stenographer can accurately transcribe unfamiliar material dictated at a rate fast enough to meet the needs of the average dictator. Training time—up to fourteen 90-minute sessions.

To adapt basic skills to the specific operations of the Veterans Administration offices, the program offers these units:

UNIT 8

PREPARING OFFICE FORMS AND REQUISITIONS

Description. By successfully completing this unit the trainee learns when to use and how to execute these most commonly used office forms: Reference Slip, Referral or Call Memo, Request for Disposal of Surplus Properties and Supplies, Office Requisition for Supplies, Requisition for General Repairs or Labor, and Requisition for Blank Forms. Training time—two 90-minute sessions.

UNIT 9

ARRANGING FOR OFFICIAL TRAVEL

Description. This unit is designed to develop an understanding of the secretary's responsibilities in arranging for official travel. The secretary is taught to prepare itineraries, to request travel authorization and reservations, request advance of funds, see that urgent business is completed, prepare and collect data and materials to be used on the trip, see that the office work is handled during the traveler's absence, plan the sequence of pending work to be done upon the traveler's return, and collect receipts for all official expenditures. The secretary also learns how to prepare these forms: Request for Travel Orders and Reservations, Application for Advance of Funds, Statement of Advance of Funds, and Voucher for Reimbursement of Expenses Incident to Official Travel. Training time—two 90-minute sessions.

UNIT 23

SPECIALIZED SHORTHAND VOCABULARIES

Description. This unit is prepared to present to the trainee a specialized technical shorthand vocabulary in medical, legal, insurance, and basic VA terms, or any other terms that the supervisor may find beneficial in facilitating shorthand dictation speed. In order to give the stenographer a thorough knowledge of all terms used, these vocabularies are selected from actual correspondence in the offices which request the training. Training time—two 1 hour sessions.

The second factor which distinguishes office training from production training is the variability of the job and its effect on the time cycle in the job. Since a production worker is likely to perform one limited operation hour after hour and day after day, it becomes a relatively simple matter to teach him this single operation, this cycle

which he will repeat without significant variation. In all but the largest companies, however, office jobs do not consist of a simple repetitive performance. Although there are discernible cycles they may stretch out over a day, a week, or even a month. A clerk or a secretary may do one job today which will not recur for several weeks. Consequently, specific job training (filing petty cash requests, letter format, telephone style, reception procedures, and expense account procedure in the particular company) must be adjusted to this extended cycle. Job training must deal first with the most important and most frequently recurrent aspects of the total job and then must be designed to meet future needs as they arise.

Some idea of the variety and complexity of skilled office jobs may be gained from an examination of the job of the personal secretary. In determining the training that a general office secretary or stenographer should receive before advancing to the position of personal secretary, Mrs. Irene Place analyzed the work performed by more than two hundred personal secretaries in sixteen communities in Michigan and reported ² these findings:

1. Shorthand and transcription are the major duties of a personal secretary.
2. The other duties most frequently performed by a personal secretary are: filing, making appointments, answering the telephone, meeting and routing callers, reading and sorting mail, placing and making long distance calls, operating an adding or calculating machine, and assisting with the preparation of written reports.
3. Peripheral duties of the personal secretary are: reading printer's proof, keeping a clipping file or scrapbook, making digests, helping to write speeches, preparing trip itineraries, making income tax reports, preparing for board meetings, plotting graphs, indexing minutes, and using duplicating machines.
4. The personal secretary may be expected also to relieve the executive of detail and routine, to safeguard his time, to act as a buffer and an outpost, and, as a representative of the executive offices, to help create good will throughout the organization.

Training for jobs of this type—and many office jobs are equally complex—requires careful long-term planning. Training will be done primarily on the job, but it must be done according to a carefully thought out plan and not left to chance.

² See Bureau of Business Research, Report No. 12, *The Personal Secretary*, July, 1946, pp. 25-26.

Summary

An examination of the preceding discussion of office and business training leads us to two very evident conclusions. First, this type of training presents a problem that is somewhat different from production training, because the people involved regard themselves and their work as being different. A training director will fail if he attempts to impose a program on office workers simply because that program has succeeded in a production or service department. Training designed for office workers must necessarily be individualized and particularized to meet their needs as the employees see them. We have seen excellently conceived training programs meet with resistance on the part of office workers simply because the examples used to illustrate universal principles drew too heavily on production situations. We have seen a supervisor training program for office supervisors collapse because a film used during an early conference on the induction of a new employee was staged entirely in a manufacturing department. The office supervisors, ignoring the principles involved, complained that the training did not apply to their departments.

Elsewhere in this book we have said that if training is to produce results it must be meaningful to the persons being trained. Nowhere is this principle more evident than in the training of office workers. A judicious application of the suggestions made in this chapter will help training men to adapt their basic training courses so as to make them meaningful to office personnel.

The second conclusion implicit in this chapter is that in general the in-plant training of office workers has been sadly neglected to date. A survey of the field yields very little in the way of comprehensive, continuing programs of training for office workers. This almost universal neglect of office training seems to stem from two widely held misconceptions: (1) the belief that because the office worker is a skilled worker or technician who possesses the required skills when he is hired he has little need for further training, and (2) the belief that the office worker is so closely identified with management and so generally loyal that there is no need to set up extensive training programs designed to build attitudes of understanding, cooperation, and loyalty.

The answer to this first misconception should be evident to everyone. In any organization the offices are the nerve center. They are the focal point in planning, coordinating, and controlling the work of the organization. To the extent that they are competently staffed, to the extent that their work is done efficiently, intelligently, and cheer-

fully, the whole organization is immeasurably strengthened. It is essential that office workers be skilled in their own special fields. It is just as essential that they understand the organization as a whole. If they are to perform their jobs satisfactorily, they must be more than technicians and specialists. They must be enthusiastic members of a team that embraces the whole company rather than jealous protectors of the exclusiveness of a small clique or department.

The second misconception is perhaps even more dangerous. The loyalty of office workers has too long been taken for granted. They have been given the role of a member of the family who needs no special attention and therefore gets none. While training has paid considerable attention to the needs and wants of those groups who seemed most removed from or antagonistic to management, the office workers have been left to their own devices in the hope that they would continue to tag along and remain contented employees. The result is that some office workers are becoming actively dissatisfied. The occasional costly breach between office workers and management can broaden into a more or less permanent separation of interest and purpose unless companies generally take active, carefully planned steps to make their office personnel intimate, enlightened participants in the businesses to which they have traditionally given great loyalty.

CHAPTER 18

GENERAL EDUCATION

Broadly interpreted, industrial training may be said to include all learning activities of employees and workers from the time they enter industry or commerce until they retire. We have said that training and education are, and should be, indistinguishable. In reality, however, practitioners in the field have restricted the meaning of the term "training" to those phases of learning which deal with the job itself. Other phases, dealing primarily with individual motivations and attitudes necessary to good performance, self-development, and the worker's relationships to the rest of the world, are usually grouped together under the heading "general education."

General education provides the understanding that employees need if they are to do their present jobs well and act as responsible citizens both in and out of the plant. At the same time it will, through encouraging self-development, assist them to live up to their own ambitions as wage earners, homemakers, and individuals. This is a large order, but it is not impractical. Personnel men know that ignorant workers are poor workers; that undeveloped, unaroused employees are liabilities. On the other hand, alert workers are a good investment and a guaranty of progress to come. As A. V. McCullough has said:

Perhaps the greatest competitive advantage to be enjoyed by an enterprise lies in the development of its human resources. While I recognize the worth of on-the-job training, I believe that attention should be paid to employee education in a broader sense. There is an increasing recognition that education cannot stop with the school or college, and that business and industry must alter their policies to accept a social obligation to provide broad educational opportunities to all employees as long as there is an expressed need for them.¹

Why General Education?

Some readers may question the desirability of spending time, thought, and money on general education at a time when many employers have yet to establish sound programs of on-the-job *skill* training. To these skeptics we can give four answers:

¹See *Management Record*, May, 1947, p. 130.

1. *Many* employers are not *all* employers. A large number of corporations have long-established training programs that are comprehensive and successful in the motor skill field. These employers are ready to go further, and some of them have done so.
2. Our schools and colleges, now crowded and understaffed, do not and cannot give students the broad and continuing education required by adults in modern industry. The lack of such education is harmful to workers, to management, and to business and society itself.
3. Business has become the way of life for Americans. Business, therefore, must assume responsibility for continuous education of managers and workers—education designed to develop them continuously and fully as human beings in both the vocational and nonvocational fields.
4. Although some of this education can be provided indirectly by schools, churches, and civic groups, experience shows that much education dealing with the job and the intangible forces surrounding it can be given most effectively within business itself. It is there that employees can take full advantage of it in surroundings which enable them to make it an integral part of their everyday work and home life.

Our first answer requires no amplification; preceding chapters show how much has already been accomplished in the generally accepted areas of training. Nor need we marshal statistics to prove that public schools and colleges cannot provide the education needed by our population of working adults. Many public schools lack money, equipment, and teachers. The colleges are so overcrowded that their efforts must be devoted to extending and improving instruction for their full-time students. They cannot and dare not attempt to add millions of new students from factories, offices, and stores.

Yet the need for worker education is urgent, and on this we must elaborate. There was a time when most business was a simple matter of buying, processing, and selling directly to consumers. All might be done by one man, or by men working in a single shop. The employer worked with his employees, and each man was a craftsman who either produced a finished article or saw it take shape in the hands of his fellow-workers. Intangibles of economics and social forces were present, of course, but they were allowed freedom to operate by such means as guilds, town meetings, or simple neighborly cooperation in the solution of community problems.

Today all this has been changed. The workman neither buys the

raw material for his product nor sells the finished article; both are done in his plant by specialized departments with which he has no contact. His employer is a corporation, not a man: a corporation whose authority and interest filter down through hired executives, supervisors, and members of a personnel department. The worker performs a single deskilled operation. If he works for a parts supplier, neither he nor his employers turn out a finished, independent product. His life in factory or business is regulated by intangibles of research, engineering, trade balances, quality control, product specifications, standard practices, and labor law, all of which he may know little about. Social factors that infringe upon him from outside the plant range from increasing delinquency to implications of atomic energy.

In short, the workers' world, even within the office or factory, is no longer simple or even rational. It has become a world of such complexity, specialization, and confusion that the uninformed, unmotivated person must either guide himself by unpredictable emotion or go utterly adrift. Once this point is granted, the major function of general education becomes obvious. It must tackle the job of turning workers and managers into informed, cooperative, understanding human beings.

The specific purpose, scope, and content of general education in industry are variously conceived. In some cases the content of general education bears no observable relationship to the job. In other cases a close relationship exists between the job and the subject matter of general education. Up to now, however, the limited vision of most managements and many training men has excluded from general education the important social and emotional relationships and attitudes regarding such things as the manufacture, sale, and use of the product; the company history, its economic standing, and its philosophy of management; specific personnel practices; company organization; and the purpose and function of all departments in the business. Knowledge of these and similar areas, once thought to be of no concern to the worker, is now being recognized in some industries as the means of developing those attitudes of cooperation and teamwork which are preliminary and essential to obtaining full production and increased employee satisfaction.

General education may place its emphasis upon any one of three specific goals:

1. It may emphasize recreational and cultural activities not directly related to the job.

2. It may emphasize self-development and self-realization in vocational or nonvocational areas.
3. It may be concerned somewhat directly with social and economic understanding of the job and the business, as well as with social and economic relations generally.

Some companies and some programs attempt to meet a single one of these objectives. Others may accept all of them as legitimate goals.

General Education for Recreational and Cultural Purposes

Cultural and recreational education in commerce and industry are based upon four facts. First, modern conditions of employment, with reduced hours per week and reduced physical demands, leave the worker with both time and energy. Second, many of the cultural subjects which have long been part of the liberal college education are quite important to the man or woman whose formal education did not go beyond the public schools. Third, modern employment demands alert minds, ready to accept new methods and consider new problems. Fourth, persons who participate in creative activity are refreshed and strengthened for the repetitive, deskilled jobs which are performed by much of American labor today. Experience suggests that the most alert and happy workers are those who frequently study, read, seek new experiences, and do not limit themselves to their specialty. From this it follows that cultural and recreational education, wisely employed, can add greatly to the effectiveness as well as to the satisfaction of employees at all levels.

General education programs which are designed to satisfy recreational and cultural needs may include courses in choral singing, contract bridge, clothes design and selection, foreign languages, social etiquette, public speaking, or furniture repair.

Many companies are currently accomplishing this type of general education both through in-plant courses and through the facilities of local schools and colleges and the various other agencies of public education.

Self-Development Education

Some companies, believing that good citizens are good employees, wish to see their employees improve as individual citizens as well as workers. These companies provide or arrange for any courses—vocational or not—which the employee finds interesting or profitable

and wishes to study. They are convinced that alert and well-informed employees carry over some of that interest to their jobs and prove to be better workers than those who are not concerned with their self-development. In short, they believe that general education—whether in government, chemistry, or costs—will directly benefit the individual, the company, and society.

One eastern chemical plant, for example, offers in-plant courses in popular chemistry, chemistry of medicinal products, algebra, electricity, the metric system, practical English, effective speech, Spanish, and Russian. A nationally known manufacturer of business equipment, as part of an extensive educational program, presents a general education curriculum including courses in such varied fields as aeronautics, effective speaking, first aid, Spanish I-II, Portuguese I-II, French I-II, current events, interior decorating, home planning, and practical psychology.

Education for Social and Economic Understanding and Cooperation

Where general education aims for understanding, cooperation, and teamwork, it deals with the business climate, the environment, and the demands upon an employee from within his own industry, but arising in many cases at points more or less distant from his immediate workplace. In these cases training directors endeavor to provide courses which may lead an employee to find interest, purpose, and enthusiasm in his job. Such courses, to have a concrete and practical value, may deal with the history of the company, the outstanding employee contributions; or they may deal with sales, company research, costs, scientific management, distribution of the sales dollar, and a study of the finished product and its destiny. These courses are designed to teach the worker about his company, its techniques and its economy, so that he will cooperate more fully with its policies and purposes.

Industries that offer this kind of training do so in the belief that it will help increase cooperation and minimize conflict. It is, they feel, the catalyst that turns employees into interested and cooperative workers—a change as essential to full production as it is to emotional satisfaction in the operator or manager. These industries have accepted the thesis that business and labor must achieve mutual survival through cooperation. As E. Wight Bakke has said, this means “that each party shall understand thoroughly the kind of a job the other has to do, his convictions about what is necessary if he is to do that

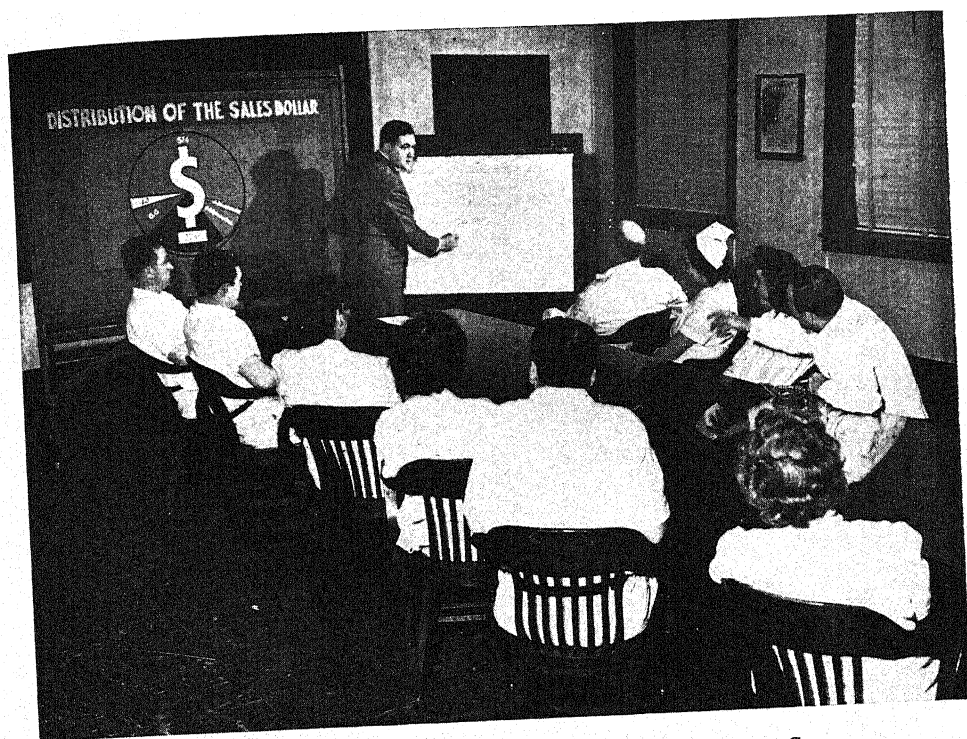
job well, the way in which the nature of the job and those convictions impel him to act as he does; that each shall see to it that his action, based on that understanding, does not threaten the survival of the job or the organization with which the other identifies himself.”²

Instruction to meet these demands will vary with the industry or commercial house, the experience of its employees, and the group for which each class is designed. We may safely say, however, that this training will be given in the office or plant and will be designed to fit the business scene. For the worker, it will deal first with practical matters, such as cost sheets, quality standards, advertising, sales, waste, and research, before going on to the more general problems of business economics and social relationships. To make palatable these ideas which are so foreign to the average worker today, courses may include one or two learning units which are more of a cultural or self-development nature than they are social or economic.

Illustrative of the courses offered to accomplish this kind of understanding and cooperation is the program described briefly below. These conferences were designed primarily for production workers and emphasized both economics and production. Training was done entirely on company time.

The program began with a discussion of the products which the employees were making. Next, the general policies and the basic philosophy governing the operation of the business were explained critically. The third conference, “Profit and Production,” was designed to give the employee a true picture of company profit, how it is distributed, and why it is to his advantage to help earn a reasonable profit for his company. The fourth session, “A Steady Job,” pointed up the dependence of American industry upon stable employment as an assurance of a stable market for its products. It endeavored to show the employee that he has security in his job and that he can increase that security by increasing his production, reducing waste, and improving quality. Two more conferences dealt with company personnel policies and practices as they relate to the basic needs of all persons. An effort was made to help each employee to recognize those means by which he can best adapt himself to his work and his associates in a relationship that will bring personal satisfaction. The seventh conference, “Spend Your Money Wisely,” dealt with the basic principles underlying money management and “buymanship.” Conference eight described in detail the operation of the company

² E. Wight Bakke, *Mutual Survival*, New York, Harper & Bros., 1946, p. 81.



Form 13. Teaching Production Workers Where the Money Goes



Form 14. Product Training

suggestion system and encouraged the employee to examine his job with a view to its improvement. The final session, entitled "Departmental Costs and Production," covered a discussion of the costs involved in the manufacture of each product, and the opportunities and responsibilities of the individual employee in controlling and reducing manufacturing costs. The purpose of this conference was to explain simply to all employees the cost of making the things they produce. It showed the advantages to company and employee in lowered costs and increased production. It asked for additional suggestions, showed how employees may increase their contribution, and discussed waste reduction, improved quality, and amount of production.

The objective of these nine conferences was to increase production through the elimination of distrust and through a better understanding of the business and of the mutual profit to be obtained from a release of all production restraints and inhibitions. The course was planned to give a basic understanding upon which cooperation and teamwork might grow. The first eight sessions, which discussed aspects of economics, costs, wages, profit, and participation, laid the foundation for putting the employees into a mood to accept their share of responsibility for more efficient production. The final conference in this series, dealing with departmental costs and production, was led by the departmental foreman who had cooperated closely in the previous sessions taught by training department instructors. This session was planned to get direct departmental application of some of the previous teachings.

This training started immediately to pay off in increased production.³ Three weeks after completion of the series, a study of production was made. The following table shows the results in the department where the training was given:

CUTTING, BATTERING, AND BOXING ABSORBENT COTTON

Items	Previous Average Production Per Shift	Production per Shift, Average for 3 Weeks After Training	Per Cent of Increase over Previous Average
5 Gram Cotton . . .	10,260 rolls	10,800 rolls	5.2%
1 Oz. Cotton	10,900 rolls	11,750 rolls	7.7%
2 Oz. Cotton	7,000 rolls	7,700 rolls	10 %

³ For a full description of this program and illustrations of the visual aids used, see W. V. Machaver, "Nine-Course Training Program Increases Worker Output," *Factory Management and Maintenance*, Jan., 1948, pp. 104-106.

Subsequent checks upon these results showed that this production increase was maintained and, in some instances, continued to increase, months after the training was concluded.

Understanding Through Participation and Teamwork

Some companies go a little further than aiming for understanding, acceptance, and compliance through formal training courses. These are the managements which believe that mutual understanding will come about fastest when employees participate more fully in those decisions of management which affect them directly. Robert Wood Johnson has brilliantly expressed this ideal of making the modern operator an understanding partner through participation in management:

The story of the man chained to the machine has been well advertised: the dull repetitious operations, the automatic procedures. We have all heard of the operators who make one insignificant part and know little or nothing of the whole product as it finally emerges. We picture industry as a conveyor belt with workers posted elbow to elbow trying hard to keep up with the relentless pace set by a Charlie Chaplin character in the front office. True, there is some of this, but it can be corrected.

The great achievement of interchangeability has something to do with all this. We now make parts to such close tolerance as to fit together into one final machine, no matter where assembled. At times several plants may make the same part, and still it will precisely fit an engine produced by another plant. This is, indeed, a great accomplishment, but it brings with it new problems in the psychology of the worker, which can be met not by inertia nor by the old rules of the game but by a new approach.

For centuries the farmer has faced this problem plowing furrow after furrow. Monotony, yes. But always he knew it as a part of the over-all work of raising a crop, which he, himself, harvested. There is a lesson here for industry and commerce. It isn't monotony that kills the spirit; it is loss of interest in the whole, no concept of accomplishment, no sense of teamwork, no sense of pride. We might find walking monotonous—placing one foot ahead of the other—were it not for the fact we felt we were going somewhere. We have monotony and repetition all around us, from brushing our teeth to eating our meals. We find certain work dull, not because of its mechanical features but exclusively because the job is without inspiration.

A new approach to this problem opens wide vistas to the experimenter. The machine tender in industry or office can be selected and trained through two widely different policies. One way is to choose the operator, train him to run the machine, and leave it at that. The other way is to select an operator with great care and train him in the full use of the machine as a modern tool by showing him what the machine does in the whole chain of processes that go to produce the final product, by

teaching him the merits of the end product and pointing out its weaknesses, by asking him to collaborate with his colleagues all along the line to improve the entire process and his part in it and to suggest improvements in the machine, by consulting him frequently on repair problems, by making the machine a living tool of which he, the operator, is master, and by getting him to aid in redesigning the whole setup. To those who design and build machines, the equipment is not dull and monotonous—it is a daily challenge. The operator becomes a partner in the business of increasing production with less effort, better work, less noise, less dirt, less oil, less waste, fewer breakdowns, more comfort, better light, better quality, and better pay. He joins with management in seeking these ends. He no longer just tends the machine. He is now a technician and a modern craftsman. The same can be done with everything from a wheelbarrow to a sewing machine.⁴

Industry and the schools have not yet grasped the revolutionary significance of a training program which will prepare American labor for this sense of accomplishment, with its attendant pride, teamwork, and feeling of partnership. The development of a training and education program which will create this partnership is the greatest challenge for industrial educators and the greatest opportunity for profit, material and spiritual, for owners and workers alike.

Attitude-Building Precedes Production Increases in General Education Conferences

General education of the type discussed above has for its primary function the building and strengthening of attitudes which will result in increased cooperation and, consequently, greater productivity. Many production men do not realize that obtaining production increases from training depends mainly upon establishing rapport and confidence between supervisor, management, and the worker. The facts presented in the nine-conference course, the discussions engaged in by students and instructors, the questions raised and answered, the doubts expressed and the frank answers received, all helped to establish receptivity in the minds of the trainees. Good management policies, high wages, superior supervision, and conventional job training were not enough in the case described above. Even though all these conditions existed, it was still necessary to precede the final conference by eight preparatory sessions, all designed to give employees practice in thinking and talking about their own and management's mutual problems. These sessions made the trainees receptive to a solicitation for increased production.

⁴ "The New Craftsmanship," a pamphlet distributed to the employees of Johnson & Johnson.

But many executives, supervisors, and even personnel men approach the subject of mutual cooperation and teamwork too directly and too abruptly. They forget that employees must be made ready for teamwork. Conferences must be so led that questions will be encouraged and answered freely. Employees must be convinced that they too will profit from cooperation; they must have time to talk the thing over, raise objections, and complain about past injustices, social conditions, and a host of other perplexities that block full understanding and confidence. They must weigh and judge the sincerity of management and the profit to them in any new cooperative venture. Building teamwork is a slow job. Frequently the original approach must be indirect, at least to the extent of establishing rapport through discussion of noncontroversial subjects. At the outset, the professional educator may recommend discussion of subjects which appear to be quite unrelated to cooperation, teamwork, or production increases.

Why Attitude-Building Programs Fail

Most attitude-building programs which fail do so for the following reasons:

1. They begin too abruptly and prompt results are usually expected. When those results do not immediately appear, the program is often abandoned.
2. Sponsors are unwilling or do not know how to create rapport by removing the causes of real grievances or by disposing of imaginary ones before they ask for cooperation.
3. Employers may be unwilling to share equitably the cash results of cooperation.
4. Employers show by their daily actions that their promises are insincere.
5. Promoters of teamwork sometimes rely on occasional "pep rallies," grand-scale parties, brief training programs, and other single spasmodic devices. They have no long-run, continuing program to develop and maintain cooperation.
6. Some employees have become so bitter, critical, and hostile that it may take many exposures to training of this type and to fair treatment before they will respond.
7. Some instructors feel that having the facts on their side is enough to guarantee acceptance of them. Actually, employees must grant a deep, personal, emotional acceptance to both the instructor and the management before facts will be freely accepted. Some

teachers are expert in building this acceptance. Poor ones ignore its need completely.

Hints for Effective Attitude-Building

Attitudes are primarily emotional, only partly logical. The attitudes of appreciation, cooperation, and will to do are, of course, most soundly and permanently developed when they are based upon facts which confirm and sustain these attitudes. But industrial leaders and trainers must keep constantly before them the principle that attitudes can be and sometimes are dissociated from fact and knowledge. The social scientists who deal with marriage relationships tell us that what an unhappily married man knows about the necessary expenses of a household may have no bearing whatever on how he feels and reacts toward his wife when he sees the household bills. We are also aware that what an employee knows about his company does not positively indicate how he feels about it. Some of us act on the basis of feeling, even when it is contrary to facts. The human tendency to rationalize is often stronger than the capacity to think and act logically. Leadership maturity in industry cannot be reached until this principle of the partial independence of attitude from fact is fully realized and acted upon. Until this principle becomes part of our working philosophy we are like naive children relying upon fairy tales as though they were business law.

Facts Versus Feeling

Too many American industrial leaders base their optimism for the future on a belief that the average American citizen and worker, given the facts, will come out with the right slant on things. The writers, too, believe this principle, but in practical situations qualifications of principles often appear to negate the principles in which they are rooted. Some degree of irrational action and unsound emotional attitude can be expected until the time when *facts* concerning the American system of business are fully integrated with action and feeling on the part of the American owner, worker, and public. Accordingly, industry should set up an educational program which will build constructive attitudes and teach the essential foundational facts to support these attitudes.

When workers remain rebellious and uncooperative in the face of constructive company activity directed toward employee and public welfare, the progressive industrialist who exhibits righteous indignation

tion is, in these days, reacting immaturity. Instead, he should ask himself the following questions: "We made our employees secure through high wages, health programs, stable employment, etc. Where did we slip in our job of making them *feel* secure? . . . We are out for their welfare too. What caused us to fail in our job of making them *feel* we are for them? . . . Every dollar of the millions we have invested is an evidence of the interdependence of capital, management, and worker. Where did we fail in our obligation to make the worker *feel* our interdependence and, consequently, his own importance? . . . We, management and capital, are persons with the same likes and fears, the same good and bad traits, the same physical make-up and background as any human beings. We like to be friendly and, above all, we like to be liked. How did it come about that we gave the impression of cold, hard, impersonal, unfriendly aloofness? Where did we fail? What can be done about it?"

Doing something about the answers to these questions is the mature approach to the problem of the gap between attitude and fact in American industry today. To maintain stubbornly that "the facts are with me and I will not move an inch" is perhaps a morally legitimate stand but hardly a profitable one from a business viewpoint or from the viewpoint of national security. Instead, the writers recommend in-plant conferences of a general nature in which employees are encouraged to question and suggest, and in which managers are taught the principles of effective leadership by which employee understanding and loyalty can be won.

Summary

General education can best be conceived as that form of teaching which endeavors to build understanding and teamwork through discussion, analysis, and participation in fields that are not directly connected with the physical operations performed by the employees. We are gradually realizing that areas once thought to be remote and unrelated do have important influence upon the worker and the performance of his job. We are also realizing that when a worker becomes interested in such areas as product design, budgets, sales, methods, costs, profits, employee services, or the product upon which he works, he becomes a happier and a more productive individual. His own job takes on new meaning for him.

We know little about this kind of training. We do not know, for example, how far away from the job we can go to select our subject matter with profit to both management and employee. Perhaps it is

best to teach first those facts and explore those forces at work in a man's own department. Perhaps it is best to start at plant level or even at community or national level. It may be, too, that the greatest good comes when the employee is left completely free to select his areas of study or when he is exposed only to cultural or recreational activities. We do not know. We think, however, that through some form of general education we can rebuild in the employee some of the job interest, pride in work, and shared responsibility which mass production and modern society seem to have removed.

The great increase in interest in general education in industry stems from an increasing acceptance of three major principles:

1. Management must take the responsibility for any deficiencies of the whole man which are not provided for by other agencies or which industry can provide better than schools, churches, civic groups, etc.
2. Man works better at any isolated, specific job when he knows all the conditions, facts, and forces surrounding that job.
3. In complex, modern industrial society, we cannot leave it to chance that workers will meet and understand all the social and economic factors of business which are necessary to satisfied, productive employees. We must teach these facts.

CHAPTER 19

PRIVATE AND GOVERNMENTAL RESOURCES HELPFUL IN INDUSTRIAL AND BUSINESS TRAINING

The preceding chapters have indicated the size of the job facing a conscientious training director in business or industry today. No matter how small or large the organization with which he is associated, he must have assistance if he is to accomplish fully the aims of training. In the large company, assistance generally takes the form of a staff of specialists, each of whom is equipped to handle a limited phase of training. In the small enterprise, however, the training director is strictly on his own. Since he seldom has either the time or the versatility to develop and carry out a well-balanced, integrated training program unaided, he probably will take one or more of three courses :

1. He may become an "educational broker." In this capacity he will devote himself to putting those employees who wish to learn in touch with institutions or individuals who wish to teach or to sell educational materials. He will subscribe to and distribute various periodicals and letters; and he will display mass-produced posters and charts supplied by bulletin-board services, making selections if possible to meet the needs of the employees and to reflect the attitudes of his company. He will publicize courses presented by local schools, and may even arrange the enrollment of interested employees. All these activities, intelligently administered, are integral parts of a good training program, but they are also very small parts. The full-time professional training director who acts only as an educational broker will therefore fail to discharge his full duty either to employees or to management.

2. Lacking the versatility to master the whole field of training, he may single out one limited aspect of training and concentrate his attention upon it. Thus he may become a specialist in sales training, safety training, methods improvement, customer relations, or some other limited area, and focus his training efforts there while he minimizes all other phases. His achievement, in terms of the broad aims of training, will be as limited as the area in which he specializes.

3. He may supplement his talents with outside resources that can be integrated in purpose and practice with his own training activities. These resources fall roughly into two classes: (a) professional or at least skilled advice in planning courses, preparing teaching aids, and developing teaching methods, and (b) the use of outside agencies and persons to carry on actual teaching.

Resources examined in this chapter belong to both classes in this third group. Although they are discussed primarily as aids to the one-man training department, they have obvious values for organizations that have larger staffs.

Other Training Departments a Source of Assistance

There was a time, not many years ago, when training men felt that they must operate in secretive isolation, each man jealously guarding his special techniques and tricks or concealing the fact that he had none. Today, through personal friendships and the programs of such organizations as the American Society of Training Directors, training specialists are sharing hard-won information, and are organizing the growing body of professional knowledge which their separate experience has built. No company or training man who now inaugurates a program need operate in a vacuum. The mistakes and successes of his colleagues in the profession are available to guide him. The many examples cited in this book are evidence of the willingness of training men to share both experience and information.

The principal source of advice and information, then, is the many established training departments in American commerce and industry. They can provide counsel on problems that confront the new or puzzled training man. From them he can secure valuable course material, teaching techniques, methods, and promotional devices. He can measure his own theories against the experience and wisdom of other men in the same profession. He may even arrange with neighboring training men to exchange actual teaching assistance and thereby bring variety into his program, perhaps strengthening it in those areas in which he is not himself a specialist.

Among the aids that may be obtained from this source are the many motion pictures and slide films prepared by private companies for internal consumption or for public relations purposes. During World War II, for example, many companies prepared for the training of their own supervisors films which carried a message equally applicable to supervisory personnel elsewhere. These companies were and still are willing to make their films available to other companies.

Trade and Professional Associations

Among the most valuable sources of information on developments in business and industrial training are trade and professional associations. These fall into three categories. First are the professional groups, such as the American Society of Training Directors and its state chapters, the American Society of Mechanical Engineers, and the National Office Management Association. Through their conferences, publications, and local chapter meetings, these organizations bring the training man the latest information on developments in their respective fields. They also assist him in his professional development and provide him with a sounding board for his ideas.

In the second group are the specific trade associations, organized by and serving the needs of a homogeneous trade group. Again, the major value of this type of association for the training director is the contact it makes possible with other men in his industry and his particular field. Whereas professional associations give him an opportunity for broad professional growth, the trade associations assist him in meeting specific problems related to the industry or business in which he is operating.

The third group is composed of the general associations, such as the American Management Association, the U. S. Chamber of Commerce, and the National Association of Manufacturers. The A.M.A., in particular, has devoted much of its editorial efforts to the promotion of improved business and industrial training. The Y.M.C.A., through its Blue Ridge assembly and the Silver Bay conference, has also contributed greatly to the development of human relations.

Consultant Services

While many consultants are prepared to conduct the training needed by any company, they are most likely to be of service through their assistance in planning programs. It is difficult to advise training men or administrators on the exact consultant services they should employ, for too much depends upon the individual needs of the business or industry being served. However, the training director who proposes to use consultants should carefully evaluate their service in the light of at least three questions:

1. *Is the consultant group sufficiently familiar with the theory and practice of industrial and commercial training?* It already has been pointed out that the training director must be a professionally trained

educator in order to carry out a modern training program. It follows that any consultants whom he may bring in to assist him should be similarly prepared. Experts in labor relations, methods, salary administration, or production control are not necessarily experts in training. Any company would be reluctant to turn over its incentive system to the tender mercies of a man whose sole qualification for the job was a thorough knowledge of inorganic chemistry. It is equally foolish to entrust the planning or administration of a training program to men who are not professionally qualified educators, however familiar they may be with problems of management.

2. *Is the consultant group equipped through experience to meet the specialized needs of the company concerned?* It will be of little value to the company or to the training director if he purchases services that are so general in character that they do not fit his own situation. The field is full of peddlers of platitudes and sure-fire formulas, and there have been distressingly large numbers of buyers for their gilded wares. But the wise training director, before he buys, will make sure the service fits the very real situation with which he is faced and the very practical businessmen or workers for whom his training must be designed.

He will also give serious thought to his ability to carry on the program that may be instituted with the aid of the consultants. One of the great failures of the war period was that private and government experts set up training programs that later were left to founder for lack of expert direction. Any training program that is established must be a continuing program, or it will be a waste of effort and money.

3. *Do the ideas, policies, and practices advocated by the consultant group conform to and advance the purposes of the purchaser's company?* If they are at variance with company aims, any training program based upon them is doomed at the outset. A program that highlights the desirability of amicable labor-management relations will be worse than meaningless in a company whose avowed policy is the discrediting and the eventual destruction of unions. On the other hand, a consultant service that regards the industrial scene as a battlefield on which it is allied with management in a struggle to outwit and befuddle the American worker will be sadly out of place in a company that tries to weld itself and its employees into one enlightened team.

To make sure that the views of a consultant service are compatible with those of his company, the training man should examine carefully

any publications issued by the service. He also should investigate the results of their work in other companies and the management philosophies of those companies. Finally, he should make sure that there is a complete understanding of basic aims before he recommends that his management contract for any service.

Sales Pressure for Training Aids

There is another type of service on which the training director is required to pass judgment almost daily. This is the myriad of training devices offered as aids to teaching or even as substitutes for it. The training director must tunnel through a dismaying mountain of sales literature in order to find the few training aids that will be genuinely useful to him. His days, already filled to overflowing with necessary jobs, are frequently made difficult by salesmen who unblushingly proclaim their qualifications as educators and assure him that their special brand of training literature is better than anything he can hope to develop.

Actually, the best training aids any program may employ are those that are developed within the company, drawn from everyday experiences and couched in familiar language. An amateurish chart that illustrates something familiar and vital to trainees is worth more than the most elegantly prepared but overgeneralized professional job obtainable. Examples, problems, and cases based on real plant situations lend a vitality to training that the "canned" case cannot give. When the training director must supplement his own material with outside aids, let him turn to established services that have proved their value. In every instance, however, this material must be regarded as a supplement to regular training programs, not as a substitute for them.

Schools and Colleges

Of more direct assistance, especially to the training director who must rely on other persons to do actual teaching for him, are the private schools and colleges throughout the country. These include liberal arts and technical colleges and correspondence schools, as well as schools or classes sponsored by trade and professional associations, the Y.M.C.A., and similar groups. Obviously, all these schools and organizations are not equal in the scope and quality of the services they can perform. Some of the groups limit their activities to training within areas prescribed by their facilities or their special occupational interests. The Y.M.C.A., for example, through its National

Council of Foremen's Clubs, is concerned largely with the education of supervisory personnel. In those communities where chapters of this organization exist, the training director should be able to arrange with the Y.M.C.A. to provide his supervisors with courses in supervision, time study, human relations, job training techniques, etc. Such courses have the added advantage of acquainting supervisors with the problems and methods of their colleagues in other businesses and industries, and of developing in them a consciousness of their professional status.

The educational work of trade and professional associations is usually broader in scope. Outstanding among these associations is the American Institute of Banking, which provides bankers with courses on almost any subject related to their work. Here, again, the training director who is hampered by the lack of a sufficient staff may depend upon such a group as this to give much of the training needed by personnel in his company.

The private schools, colleges, and correspondence schools have played a significant role in industrial and business training. The problem to date has been that companies have failed to take advantage of these services in any planned fashion. An ambitious employee wishing to advance himself in his job through education has been compelled to select for himself the services of these schools or colleges. Some companies have gone so far as to reimburse him for his tuition expenses, but seldom have companies formally incorporated the services of these outside agencies into their own training program.

Cooperative Education.—One encouraging development of the past few years, which points the way to effective utilization of these services, is cooperative education. Under this system, a student spends part of his time in school and part on the job in some company. While this approach has had its greatest development among the public secondary schools, it has also been applied with considerable success on the college level. Cooperative education enables the worker to combine practical on-the-job experience with theory. Many companies have made their own adaptations of this method and are conducting excellent cooperative training programs for their technical and administrative personnel, for clerical employees, and, in some instances, for their regular production workers.

The York Corporation, for example, has a well-developed program that functions in cooperation with Pennsylvania State College. Excerpts from the booklet describing this cooperative course indicate the detailed planning involved:

The York-Penn State Cooperative Course is a plan whereby an employee alternately attends the Pennsylvania State College and works at the York Corporation. Over a period of five years thus spent, he earns a regular degree in engineering from the college and simultaneously acquires a practical knowledge of manufacturing activity, the products and the organization of the Corporation.

The purpose and basic objective of the . . . course lies in the sound engineering training it provides by the fusion of practical work and theory. . . .

Upon acceptance into this program, the applicant will be expected to signify his intentions of:

- (a) Continuing the course to a successful conclusion.
- (b) Continuing his employment with the York Corporation following graduation.

The development, manufacture, sale, and application of the Corporation's products—refrigeration and air conditioning equipment—is a highly technical business, requiring specialized engineering knowledge. Two courses of study at the Pennsylvania State College best serve the basic engineering educational needs of York. They are:

- 1. Industrial Engineering
- 2. Mechanical Engineering

The Industrial Engineering curriculum is a program of study which covers the basic courses in science and engineering required of all engineers, followed by subjects relating to the management, control, and administration of production activities. The outlets for Industrial Engineering graduates, in terms of specific work at York, lie in the following phases of Manufacturing Division activity:

Manufacturing Methods	Purchased Material Control
Rates	Purchasing
Production Control	Production Supervision
Scheduling and Planning	Industrial Relations
Manufactured Stock Control	Customer Contact

Mechanical Engineering follows a program which covers the basic courses in science and engineering through the first two years and continues with applicatory courses on steam power plants, refrigeration, internal combustion engines, and turbines throughout the later years. It serves as a source of personnel for the Engineering and Sales Divisions of the Corporation, as follows:

Engineering Research	Sales Engineering
Development Engineering	Service and Erection
Application Engineering	

One hundred weeks makes up that portion of the course spent at the Corporation. It is planned that this work experience will be distributed as follows:

A. INDUSTRIAL ENGINEERING

1. Factory Period

General Machine Shop	8 weeks
Compressor Erection Floor	6 weeks
Welding Shop	6 weeks
Boiler Shop	2 weeks
Sheet Metal Shop	6 weeks
Woodworking Shop	1 week
Foundry and Pattern Shop	5 weeks
Condensing Unit Department	4 weeks
Pipe Shop	4 weeks
Room Cooler Department	2 weeks
Fitting Shop (Turret lathes and automatic screw machines)	3 weeks
Inspection and Testing	6 weeks
Dispatching (Setting up work station load charts)	2 weeks
Subtotal	55 weeks
Elective (To be spent in any one of above work classifications as an area of specialization)	15 weeks
Total Factory Period	70 weeks

2. Office Period

Methods Department	8 weeks
Rates Department	6 weeks
Scheduling	6 weeks
Sales Order Service	2 weeks
Manufactured Stock Control	4 weeks
Purchased Stock Control	3 weeks
Traffic Department (Arranging movement of incoming and outgoing shipments)	1 week
Total Office Period	30 weeks
Total	100 weeks

B. MECHANICAL ENGINEERING

1. Factory Period—Same as shown for Industrial Engineering except that elective period of 15 weeks is excluded, leaving

55 weeks

2. Office

Drafting Department	12 weeks
Engineering Laboratory (Including possible Development Department experience)	20 weeks
Sales Engineering Department or Mechanical Engineering Department	13 weeks
Total Office Period	45 weeks
Grand Total	100 weeks

It is the Corporation's desire and intent that graduating members continue their employment with York upon graduation.

College Extension Courses.—Differing from the cooperative courses described, but equally valuable to the training director in the formulation and conduct of his program, are the many extension courses offered by the state and private schools and colleges which

MINIMUM REQUIREMENTS FOR TRADE AND INDUSTRIAL EDUCATION COURSES

TYPE OF COURSE	BASIC PURPOSE OF TRAINING	MINIMUM LENGTH OF COURSE	HOURS AND DAYS CLASS MAY BE HELD	MINIMUM AGE OF STUDENTS, CLASS SIZE, ETC.	OCCUPATIONAL STATUS OF STUDENTS
DAY TRADE PREPARATORY (including practical nurse training)	<p>To prepare students for specific useful employment in an occupation of approved trade or industrial character. This program serves as an excellent foundation for a future industrial apprenticeship.</p> <p>The program is usually 2 years of at least 36 weeks each.</p>	3 consecutive clock hours per day for total of 15 hours per week for the major subject, 7½ hours per week in related subjects, and 7½ hours per week in general education subjects. Alternate plan is 4 consecutive clock hours per day including essential related instruction.	<p>After 7 a.m., before 6 p.m., Monday through Friday.</p> <p>36 weeks or more per year.</p>	15 YEARS Maximum allowable class should not exceed 25 students with one teacher, and cannot fall below ten.	Unemployed, unless part-time out-of-school job for which the student has a work permit. The student must be in school for a full 30 hour per week program.
PART-TIME COOPERATIVE OCCUPATIONAL TRAINING	To prepare students for any occupations for which training is required. These include: all service, office, retail sales, semi-skilled industrial, dairy product, floriculture and landscaping, photographic, and many other occupations.	<p>2 periods per day must be devoted to subjects directly related to the job. 2 periods per day may be of the usual academic type of subjects.</p> <p>144 hours per year minimum related instruction—168 recommended.</p>	After 8 a.m., before 6 p.m., Monday through Saturday.	15 YEARS Completion of the 10th grade recommended. Class size is determined by local circumstances, with a minimum attendance of 15.	Students must be employed at least as many hours per week as in attendance at school, but may be in school or out-of-school trainees.
PART-TIME COOPERATIVE OFFICE PRACTICE	To extend the trade knowledge and skill of apprentices employed in trade or in industrial occupations.	144 clock hours of related instruction in school, per year, at the rate of 4 hours per week minimum. 168 hours recommended.	During working hours, or at other times with special permission.	16 YEARS Completion of the 10th grade recommended.	Actively employed in some skilled craft or trade which has been recognized as apprenticeship.
CRAFT AND INDUSTRIAL APPRENTICESHIP	To extend the occupational knowledge and skill of persons engaged in trades, and industries. Course must be supplementary to daily employment.	Single short unit or series of units. Two or more hours per week until individual receives training needed.	After 6 p.m., or during the day for night workers.	8 students minimum class attendance. 16 YEARS or 8 students or more.	Regularly (full-time) employed, (or temporarily unemployed) workers in trades and industries.

PART-TIME TRADE EXTENSION (including practical nurse training)	To extend the trade knowledge and skill of persons employed in industrial occupations. Courses must be supplementary to daily employment.	Single short unit or series of units. Two or more hours per week until individual receives training needed.	Any time day or night.	16 YEARS minimum class attendance.	Employed (or temporarily unemployed) in the occupations to which the course is related.
PART-TIME TRADE EXTENSION PUBLIC SERVICE	To extend the trade knowledge and skill of persons employed in public service occupations—firemen, policemen, assessors, conservation workers, custodians, etc.	Single short unit or series of units. Two or more hours per week until individual receives training needed.	Any time of day or night.	16 YEARS minimum class attendance.	Actively employed in the type or field of public service to which the course is related.
PART-TIME TRADE PREPARATORY (including practical nurse training)	To prepare young workers for an occupation other than the one in which they are employed.	144 clock hours per year minimum.	8 a.m. to 6 p.m., Monday through Saturday.	16 YEARS minimum class attendance.	Legally left full-time school, and lawfully employed or temporarily unemployed.
PART-TIME GENERAL CONTINUATION	To enhance the civic or vocational intelligence of young workers. (Civics, English, Arithmetic, etc.) (General Shop, Home-making, etc.)	144 clock hours per year. 4 hours per week.	After 8 a.m., before 6 p.m., Monday through Saturday.	15 YEARS minimum class attendance of eight.	Legally left full-time school, and lawfully employed or temporarily unemployed.
PART-TIME GENERAL CONTINUATION OFFICE PRACTICE	To extend the trade knowledge and skill of persons employed in office occupations.	4 clock hours per week minimum. The usual plan is 4 hours per week for 36 weeks.	After 8 a.m., before 6 p.m., Monday through Saturday.	16 YEARS 8 active members in class.	Legally left full-time school. Sixty per cent employed in offices, twenty-five per cent may be temporarily unemployed office workers, and fifteen per cent maximum unemployed.
FOREMAN AND SUPERVISORY TRAINING	To improve the supervisory job skills of foremen and other industrial supervisory personnel through group conference discussion.	Single short unit or series of units. Two or more hours per week until individual receives training needed.	Any time of day or night.	16 YEARS conference membership and size determined by individual and local needs.	Actively employed in an industrial supervisory capacity.

Form 15. Scope of State-Supported Vocational Training

are directly applicable to business and industrial situations. During World War II, much training of this sort was done through the government-sponsored ESMWT. Most colleges are still prepared and anxious to offer such courses.

The scope and variety of the programs available through university extension work are illustrated by courses given by one eastern university. The schedule includes thirteen courses in mathematics; five in chemistry; thirteen in management; ten in accounting; eleven in economics; twelve in English; and many other courses in art, languages, sociology, philosophy, political science, bacteriology, physics, psychology, history, finance, law, marketing, real estate, geology, and insurance.

The research and educational activities of the major American colleges and universities indicate their growing interest in the commercial and industrial world. Any training director who has the services of such institutions available to him will find his training program immeasurably strengthened if he uses these services fully and intelligently.

Governmental Aids to Vocational Training

Training directors who wish to supplement their own in-plant program with the types of skill and factual training that may be handled effectively by outside training groups will find the many state and federally supported schools and agencies of considerable assistance. In addition to their regular curriculum offerings, most of the schools are able and willing to develop special courses and types of training to meet the particular needs of a local business or industry.

An illustration, both of the scope of vocational training and of the manner in which this training is customarily organized, is Form 15, prepared by the Michigan State Board of Control for Vocational Education.

Through city, county, or state administrators of vocational education, the training director can arrange for courses in almost any field for the employees in his company. These courses will be presented in the local vocational schools or on company premises, depending largely upon the wishes of the company or the nature of the instructional equipment necessary and available.

Through the combination of these various types and levels of instruction the training director can accomplish almost complete coverage of his training needs. The services of the vocational schools may be supplemented by those of the public high schools and the

state-supported colleges and universities to provide more complete coverage of those training needs that can be accomplished through out-of-plant training. Courses in public speaking, report writing, civics, economics, modern foreign languages, or business law can readily be planned and taught with the assistance of secondary school teachers and administrators. On the more advanced technical and professional levels, state colleges and universities offer extension training that may be tailored to the individual needs of a business or industrial organization.

Summary

In view of the extensive resources described in this chapter, there is little reason why any company should not be able to meet its training needs fully and according to accepted professional standards. A final caution must be heeded, however, in the use of these services: unless the contributions of these outside agencies are made specifically applicable to the business or industrial situation in which they are being presented, they will miss their full usefulness. Training must be meaningful to employees in terms of the language and the activities with which they are familiar.

It should be repeated, too, that there are certain types of training that cannot be done effectively by outside agencies. Orientation will always be an in-plant job. Many phases of supervisor training must also be done within the company and by representatives of the company. In the final analysis, the training director must regard these outside resources only as extensions of his own efforts, and should use them to compensate for his own limitations or the limitations of his staff.

CHAPTER 20

SPECIAL TRAINING PROBLEMS OF THE SMALL COMPANY

Difficulties of the Part-Time Training Director

The most important training problem of the company too small to have a full-time training director is simply the problem of finding and taking the time to think about training, formulating a training program, and carrying it out. Although several small companies have instituted successful training programs, there are cogent reasons why many small plants find it more difficult than a large company to give continuous, planned, and regular attention to training.

When the full-time training director of a large company comes to his work in the morning, training literature is on his desk. His correspondence deals with training. All his unsolved problems are training problems. The new problem he must tackle at the three o'clock meeting is a venture in training. He works, breathes, and lives training. He knows that if he fails professionally it will be because his training program has failed; if he succeeds it will be because his training program has been successful. He pushes his job every minute of the day, protecting both his field and its objectives against the encroachments of other specialists who would overemphasize their own specialty to the detriment of training. To higher management, he is a constant advocate of training and its primary objective, which is improved performance.

The typical part-time training director in a small company works under very different conditions. He may also be the production superintendent; if he is, production problems will surely face him the moment he arrives on the job, for in the realm of production there are always emergencies. He may recognize that good training is necessary for good production, but because of the pressure of his own immediate business he seldom has the time to deal with training. A key machine has broken down; there is a rush order; the boss is waiting for an estimate on that new purchase; the members of the board of directors or the auditors are coming for a visit, and things must be in order. And so it goes all day and all week. A basic, preventive, deliberate training program is just another of those

things to be worked on "when things straighten out"—as they never do.

If the part-time training man is the personnel director or one of his assistants, the same conditions will usually prevail. The major, immediate, pressing personnel problems receive first and, eventually, all attention. Joe Smith is waiting to see the personnel man when he comes to work in the morning. Joe, one of the most valuable workers, must get a house to live in or he will quit. While the personnel man pulls wires, the president calls for statistics on average wage, excluding overtime, for a certain week four months past. The union steward raises an urgent question involving local interpretation of national labor law: it can't wait, because gossip has stirred up the line employees. Again, training becomes one of those things that will receive attention when things do—as they never will—settle down.

This does not mean that the average production superintendent, personnel worker, or time-study man who is also supposed to be a part-time training director is a sluggard or a poor planner. He could not hold his job if he were. But he may deliberately shelve training either because he believes that other urgent jobs come first, or because he has shrewd insight into what the boss is most likely to demand in supplementary fields. Any production man with training as a side-line would probably cancel training on a particular day and see that the plant was clean if he knew that on that day top management was more interested in a clean building to show visitors than in the supervisors' knowledge of the social security regulations. Any personnel man would shelve training conferences and stage pep talks to bring in old clothes if he knew that the plant manager would be highly displeased if the old-clothing collection flopped but would merely say, "How come?" if training classes had not been held. If one such decision is made per week, then an entire year will pass without effective attention to training.

How Top Management Should Approach Training

If this human tendency to defer training in the small plant is to be overcome, *top management must make one person responsible for training and for specific training objectives and procedures, and must give him a chance to fulfill that responsibility.*

The responsible person should be held accountable for training just as he is held accountable for personnel records, safety, office systems, or whatever else he is doing along with his training. The top execu-

tive should train himself to react as negatively to bad performance in training functions as he would react to bad performance in the other functions he has assigned the part-time training director. He should convince himself and his training man that an ounce of preventive training today is worth a pound of good "plug-the-leak" administrative action tomorrow or next year.

These, then, are the first and fundamental steps that top management should take in order to make training work in the small plant: give one man complete responsibility for the training functions; let him know it; hold him to it; never let him forget it; praise him as highly for a good job of training as for a good job of waste control; tactfully express as much displeasure for a bad job of training as for a bad job of employment or payroll management. A part-time training director will almost certainly fail if he is not held wholly accountable for the training functions and if top management does not encourage him to devote time and effort to training.

Management should constantly remember that nothing constructive is accomplished when a man is held responsible for a function that he cannot possibly find the time to perform. Therefore, in its approach to training, management should first give the part-time training director full responsibility, and then relieve him of certain other duties or give him full backing by assigning to training a priority position among these duties. The top executive should tell the new training director: "John, in addition to your other duties, you are now completely in charge of training. You are responsible for getting new employees off to the right start with the right information, as well as for seeing that a simple but efficient job training arrangement is made with their supervisors. As soon as possible, take those training steps you think necessary to make sure that our employees, from the highest department head to the lowest cleaner, know what our company is, what it does, what it thinks, what its problems are, how we depend on each other. The objective is to attain a minimum of misunderstanding and a maximum of intelligent cooperation. You now have the authority to hold all those meetings and to make all those personal contacts you think necessary to keep our supervisors abreast of what's going on in their kind of world. Teach them how to handle their employees, how to manage their jobs, how to analyze and tackle their problems successfully, and how to build sound policy.

"I want you to train me too. Please let me know what you learn from your conferences and contacts that will help me in making and

administering policy. Send me clippings and articles on subjects you judge important to me.

"I would like you to consider yourself just as responsible for these things as for your other duties. If you find that you cannot do those other duties and the training you think necessary at the same time, *come to me and tell me so*. Don't come to me afterward and say, 'I did not do that training we had scheduled because that other job came up.' Come to me before and say, 'I am now on schedule with my training but that other job is coming up, and I cannot do it and training too. Which shall I neglect?' Then the problem is in my lap and I will either arrange for someone else to do the other job or clear you of the responsibility for neglecting training."

We cannot emphasize too strongly the necessity of approaching training in this spirit, for stumbling on this point is the most common cause of failure.

The Right Man—Not the Logical Department

In the large industry it is generally recognized that the training department should be a division of the industrial relations or personnel department. Professional training men of the right qualifications are sought, selected, and placed within the organizational structure of the personnel department. This makes sense, for training, as asserted repeatedly throughout this book, has turned toward broad but integrated human development, and away from limited compartmentalized and disassociated skills and facts as primary aims. For this reason, training is logically a function of the personnel department, which is concerned with "human" problems.

Experience has shown, however, that the success of a training program in a small industry depends far more upon the qualifications of the individual director than upon organizational location. Many small businesses do not have personnel departments, and some that have them in name really have just office managers, employment managers, or production assistants who act as personnel managers but whose personnel responsibilities are small compared with their responsibilities for other jobs. Moreover, in the small company there is a greater likelihood that all key men will have a working idea of the human as well as the technical problems of the business. Frequently, no one department is qualified to cope with the problems peculiar to training. For these reasons, emphasis in the small plant should be placed on finding the right man for training rather than the

right department in which to center the responsibility for the training functions.

Qualifications of the Small Plant Training Director

The desired qualifications for a full-time training director were discussed fully in Chapter 5. Here we shall discuss those qualifications which are especially important in the selection of a part-time training director.

Skill in Human Relations.—Probably no quality is more important than this one. Proved success in leading people, in getting along with them, in winning their confidence and friendship—this skill is a tremendous asset to the training man. This does not necessarily mean that he should have a wide reading knowledge and verbal accomplishment in the fields of employee relations, sociology, psychology, and the like, nor does it necessarily mean an ability to talk pretentiously about people. It does mean a demonstrated skill in being able to work effectively with people. If there is someone in the plant who has experience in dealing with people *and* experience in teaching, that is so much the better. But since it is most unlikely that this happy combination will be found in the small plant, the search should be for someone skilled in human relations.

Administrative Ability.—Throughout this book much has been said about the wide scope of training. The term "training," as used here, includes the systematic and calculated development of a wide variety of knowledge, skill, and attitudes for every level of employee, from the janitor to the president. Viewed from one angle, the problem of training seems to require an almost impossible range and degree of ability in the training director. If he were not permitted to call upon the specialized skills of others for assistance in teaching, if he were forced to be an expert in all subjects taught in a broad training program, then the training director would be required to perform an impossible job. However, no training man has ever been asked to conduct every training meeting and study every training subject. *Administration* is the training director's most important duty; and administrative ability is, therefore, one of the basic traits to be sought in the part-time training director. He must be able to plan, organize, establish, and supervise programs of education and training which others, whom he will select and train, will actually carry out.

Status in the Plant.—Since training involves important and varied responsibilities which, to a large extent, must be handled through delegation, supervision, and administration, the training director in the small plant should have or should be given high status in the organization. It would be fruitless to give a person responsibility for those training functions that were outlined in Chapter 2 without, at the same time, giving him the status necessary to carry out these responsibilities. This status should certainly be higher than that of a foreman or supervisor; it should be high enough so that production supervisors know that the training director is *speaking for the head of the plant himself*. This can be accomplished most easily if the man who is given the training responsibilities reports directly to the top executive of the company, although this may not be necessary if the employees know that the training director has the support of the plant head, and is carrying out his wishes.

The Development of the Program

Conferences to Plan and Chart a Course.—The part-time training director can make no better move than to preface his formal training attempts with a series of top-management and supervisor conferences designed to discuss and enlist support for training. No industrial education program can attain immediate success unless all the key men know about it, want it, sympathize with it, and are enthusiastic participants in its planning and execution. This selling job can be done in a series of regular weekly or semiweekly meetings. Preparatory to training, the following steps are suggested:

1. In the first meeting the head of the business should impress the conference members with his views on the subject of industrial education, its necessity, its values; his backing of both the training program and the training director.

2. The training director should review the present industrial and business picture in the United States, and show the absolute necessity for a planned program of industrial education and improvement for everyone in the plant.

3. The key group should discuss and recommend, and the president of the business should approve, a long-time educational and training program which may include:

- (a) Continuous management and supervisor conferences.
- (b) Orientation program for new employees.

- (c) Operator or production training program.
- (d) Technical training courses for key men and some employees.
- (e) In-plant courses taught by professional, outside instructors.
- (f) Scholarships and company-sponsored out-of-plant education.

Putting the Plan in Operation.—The newly appointed part-time training director, having used his group of key men to help develop a plan of training for all employees, should then continue to consult with them in a series of well-planned conferences dealing with the various problems of leadership necessary to the growth and development of all employees: job organization, personnel policy recommendations, agreement on standard procedure, personal development, costs, waste, budgeting, safety, attitude-building techniques, principles of organization, and many other topics.

The training director should not feel unduly concerned if, at the beginning of these conferences, he is uncertain as to just what topics will be worth while and interesting to the conferees six months or a year after classes start. Experience has shown that if the conferences are handled properly the only problem will be to find the time to discuss all the subjects in which the conference members are interested. It is probably wise to adopt a general, long-time program which is subject to change and which has some variety and balance, and to make certain that there is time available for discussion of special problems which may arise or for unforeseen, extended discussion of regularly scheduled subjects.

What should the part-time training director do if he has not had previous experience in leading conferences, if he lacks the knowledge of how to teach and how to prepare a training program? Much of Chapter 11 deals with in-service improvement of training men. The part-time training director should take advantage of the many self-improvement opportunities discussed there. Included among these opportunities are visits to established training departments; courses in conference leadership, preparation of teaching material, industrial psychology, etc.; consultant services; and a host of other self-improvement possibilities. The part-time trainer should be the most constant and most conscientious learner in the small plant.

Generally he will want to set up an orientation program as one of his first activities after the supervisors' conferences begin. Since he probably will serve as organizer and administrator in this program, he should take these steps:

1. Have the members of the supervisor conferences decide what subjects should be included in orientation.

2. Draw up an outline of what information each supervisor should have and what information should be transmitted to the new worker in the orientation classes.
3. Select and prepare a person to give the orientation facts to new workers. The orientation instructor may be one of the supervisors, the employment or office manager, or a capable secretary.
4. Administer the orientation training program.

In operator- or job-training programs, the part-time training director also should act largely as administrator rather than as trainer. He should get the members of the conference group of key men to answer these questions:

1. Which operators will be designated as instructors?
2. What preparation will new instructors need in how to instruct, and in proper job method?
3. How will instructors get this preparation?
4. Where do the responsibilities of (a) the instructor, (b) the training director, and (c) the department supervisor begin and end with respect to the training of the new employee?

The training director should then act as the administrator by putting these decisions into effect and by following up to see that job instruction proceeds as planned.

The part-time training director may find in his own plant most of the talent needed for instruction in technical subjects. Such subjects as waste, cost, and quality control can be taught effectively by the very men who have administrative responsibility for these duties, if they have just a modicum of teaching ability. In almost every plant there is at least one man who knows the machines and processes and who can do a good job of teaching the advanced technical facts concerning them. The right man may be the superintendent, the master mechanic, a supervisor, or an exceptional employee. It is the training director's job to find this man and assign him to instruction work. He should then assist the technical expert in breaking down the subject for instruction, and should give him some training in how to instruct. If the training director so desires, he may merely administer this duty; that is, he may get an experienced training man to prepare his technical expert to teach.

Chapter 19 discussed private and governmental resources helpful in industrial training. Lacking a staff of specialists, the part-time training director must make greater use of these resources than the full-time, professional training director. As we have said, the part-

time director cannot prepare for and teach all or even a large part of the educational subjects necessary in any well-rounded program. His success will be measured by the number of educational opportunities that he can make available rather than by the number of hours that he devotes to actual, detailed instruction.

Summary

Many industrial training programs fail in small plants because too little attention is devoted to training. Top management can take two steps to avoid this neglect. First, it can appoint one key man in the business as part-time training director. This man should be thoroughly impressed with the fact that industrial training is his responsibility, and should understand that he will be held accountable for training as well as for his other duties. Second, top management can and must rearrange the part-time training director's schedule so that he will have time available for educational work; this work should be given priority over some of his other duties.

In selecting the part-time training man, management should try to find the person best suited for the work, instead of trying to place training in what appears to be the most logical department. The part-time training director should be skilled in working successfully with people; he should also have administrative ability, a position of status in the organization, and an understanding of the aims of modern industrial training programs.

The training director should begin his program with a series of top-management and supervisor meetings. This management group should function as a planning body in setting up the long-time educational program for the plant. These key men should act continuously as advisors and assistants and, in addition, should pursue a never-ending course of job- and self-improvement of their own.

The scope of the educational program should include orientation, operator or production training, technical training courses for key men and some employees, courses led by outside instructors, and scholarships and company-sponsored educational activities carried on in outside institutions. The role of the part-time training director with relation to this program should be largely one of administration.

CHAPTER 21

THE INTEGRATED PROGRAM

The preceding chapters have discussed the many facets of industrial and business training. In analyzing the administrative and instructional problems of training, as well as the wide range of subject matter to be treated, we must take care, however, that we do not lose sight of the ultimate aim of all training as it was stated in Chapter 2:

To build continuously and systematically, to the maximum degree and in the proper proportion, that knowledge and those skills and attitudes which contribute to the welfare of the company and the employee.

This aim of the complete and continuous development of each individual, to the mutual advantage of both employee and employer, cannot be achieved through sporadic, unrelated training efforts. The full benefit of training will be achieved only if the program is so integrated as to direct every class, every publication, every method and technique toward the accomplishment of this ultimate aim. Without such integration the educational efforts of any company will be as ineffectual and as potentially disastrous as the operation of a railroad line without benefit of schedules. Sooner or later, either a head-on collision of antithetical teaching will wreck the program, or the trainees will become so confused and discouraged by the duplication of subject matter or by the use of conflicting methods in different departments that the ultimate goal will never be achieved.

Complete integration of training efforts is obviously not a simple task. It must be carried out on these four major levels:

1. *The training program must be integrated within itself.* The training program may be compared to a jigsaw puzzle: a whole composed of many seemingly distinct segments which interlock to form a complete, meaningful picture. Each element therefore must complement every other element.

Consider the single example of the proper induction of a new employee. Formal orientation training is the most conspicuous contribution to this job. But what of the receptionist and the interviewer who first meet this employee? Have they also been trained in their

jobs of promoting the quick adjustment of the new employee to his work environment? After formal orientation has been accomplished, will there be a planned induction to the department? Has the supervisor been trained to do this? Is there an efficient scheme for familiarizing the new employee with his job? Orientation training, supervisor training, technical training, trade training, office training, and general education—all of these overlap and impinge upon this one problem of the satisfactory orientation of the new employee.

Similarly, training plans for the various levels within a company must be closely integrated. Training of executives, supervisors, and workers must have a core of unity. There is little value in teaching sound administrative principles to the first-line supervisor if he knows that his superiors constantly violate those same principles. We cannot expect loyalty and understanding from a worker if his supervisor is confused and disgruntled. The need for the development of skill, knowledge, and attitude is as great and as important in the top executive as it is in the janitor.

2. The training program must be integrated with other services that contribute to the full development of all company personnel, whether those services are given within the company or by external agencies.

In-plant training programs must be integrated with the educational efforts of the various outside agencies. It is pointless, for example, for any company to duplicate courses offered by local schools and colleges. On the contrary, the wise training director or administrator will seek the support of the schools in areas of general education, and will devote his own time and talents to training which must be particularized for employees of his own company. Similarly, company training programs should make all possible use of government facilities, of foremen's clubs, of union educational activities, and of organizations like the American Management Association. The degree to which these services are used will depend upon the size of the company and its training department.

Next, there must be integration of the many educational media that are seldom recognized as proper elements in the work of training. One of these media is the company newspaper; to the extent that it is used for anything more than the peddling of gossip, it can be a training device of considerable importance. Through its pages employees can be familiarized with the plans and policies of their company. They can be introduced to the departments outside their own and helped to understand the interrelationship of units within the

total organization. Healthy attitudes toward their jobs and the company as a whole can be built on a foundation of facts, honestly and clearly presented.

Every in-plant or outside broadcast, every general announcement, every statement or action under the heading of public relations, should be examined in the light of its relation to training aims. The importance of this was brought home to one training director when he reviewed the final draft of a handbook being prepared for employees. Here an advertising agency writer, with one eye on the buying public, had written poetically of the finished product "floating" from machine to package. That word cavalierly dismissed the daily labor of a large group of packers, casers, and sealers, and could have defeated the training department's current effort to build job pride in those very people. Similarly, many a labor relations executive has seen his carefully nurtured union-management harmony destroyed by a single, well-meant, yet unwise remark by a company spokesman who could not envision its effect upon labor leaders or workers.

Staff and general employee meetings, contract negotiation sessions, regular grievance meetings, and the many other formal and informal contacts between the company and its employees offer valuable opportunities for education. They must, therefore, be closely integrated with the regular training program.

In the category of outside training aids belong publications that find an eager and sometimes indiscriminating market among employers. These newsletters, periodicals, poster services, package programs, and the like are designed to impart knowledge or to develop certain skills and attitudes. Unfortunately, these materials are by no means uniformly good, and some are so badly designed as to arouse resentment, foster suspicion, or contradict and invalidate in-plant training efforts. It is imperative, therefore, that their editorial policies and their preachments be examined in the light of the company's training goals.

3. *Training obviously must be integrated with the needs of the individual employee.* Since the employee is not static, since he is constantly growing and developing new skills and new attitudes, efforts to direct his development must keep pace with his growth. Failure to plan training to meet the continuous change in the individual will negate whatever value there may be in sporadic training.

The experienced gardener has learned this lesson, though for plants rather than human beings. He is forever pruning, watering, fertilizing, cultivating, and spraying his plants and flowers. If he

tires of this work and ignores his garden for a fortnight, nature does not wait passively for his return. In his absence, weeds and noxious insects flourish; beans, peas, and tomatoes fraternize in a luxuriant tangle or wilt and die from lack of care. They do not remain unchanged—nor does a workman. Every day he develops important work habits, acquires attitudes toward his job and his company. The company that wishes to direct this growth, to channel it into patterns that benefit the individual, his group, and his employers, must maintain training as an uninterrupted, integrated process tuned to the changes taking place in all its employees.

This means that training for the individual employee must be set up to coincide with and to foster his progress from the time he is brought into the company until the day he leaves. It must meet the varying needs of the individual at any given stage in his progress. The same man faces the customer, receives instruction from his supervisor, takes the floor in a union meeting, or discusses the company and its products with his neighbors.

Knowledge, skills, attitudes, and actions are all inextricably bound together. If a man is to perform efficiently at his job, training must recognize this inseparable relationship, for only by means of an integrated program can the ultimate objectives of training be achieved.

To do this, training first must satisfy the requirements of the individual as they relate to his job. He must receive initial orientation; he then must receive the necessary job training for each level to which he attains. His individual weaknesses and strengths must be discovered, and training must be prescribed to correct the former and capitalize on the latter. In the second place, training must reach and influence the whole man. It must guide both his hands and his heart. It must prepare him for full, satisfactory living on the job, at home, and in his community.

4. *The training program must be integrated with company needs.* It has already been said that training is both preventive and remedial in purpose. Preferably, the bulk of training will be designed to forestall difficulties by creating an efficient, cooperative work force. In part, however, training must meet the immediate problems that inevitably arise. The training administrator must therefore be fully cognizant of these problems. He must also be in a position to know in advance about product changes, organizational changes, policy developments, economic problems, and other major factors which may create problems or for which preventive training may be necessary.

How Is Integration Accomplished?

Like most of the solutions proposed in this book, the answer to the problem of integration does not lie in any simple formula. There are many facets to the answer just as there are to the problem itself. Of first and most obvious importance, of course, is the position of training in the company organization. There must be one person or one department responsible for all the training done within the company. Unless there is one specifically designated coordinator, there will be no coordination.

In addition, this coordinator of training must occupy a position in the organization that makes it possible for him to have that direct access to top management and top planning which guarantees him a familiarity with every aspect of the enterprise. If the head of the sales division in a company were to report to the chief cost accountant, the results would be ludicrous. It is no less ridiculous when a training director, charged with the accomplishment of the broad aims previously outlined, reports to an office manager or a production department head. From this level, unless he ignores his own teachings and crosses every line of authority in his path, he cannot possibly achieve the integrated program. The problem is not simply one of authority; if a training program is good, it does not need to be sold with a cudgel. The point is that the training director, as the staff specialist and advisor on educational matters, must know what is going on in all the company. His services must be available to top executives whenever they are formulating policies that will affect employees. He must sit in on the creation of plans and be accorded the same voice as the directors of research, sales, or finance in all those situations where employee knowledge, skills, attitudes, and actions are involved.

Another step in the establishment of the integrated training program is the creation of an advisory board or committee whose function it is to assist the training director in the formulation of training plans and the translation of training aims into specific objectives in the different divisions of the organization. Such a committee should be composed of representatives from each of the company's major divisions. They should be executives of sufficient stature to speak authoritatively for their divisions and to arrive at decisions relative to training which will carry the stamp of management approval. Sometimes it is also desirable to establish subcommittees within each division as a means of enlisting additional support and promoting maximum coverage in soliciting ideas for training. Particularly

when an organization is made up of many companies, geographically separate but operating under central control, the use of subcommittees is essential to escape the feeling that training is being imposed autocratically and without regard for the needs of the individual company.

Further practical means of integration are the long-range plans referred to earlier in the book. Through this means training is integrated in terms of both over-all purpose and specific objectives, courses, and classes. Some training directors have taken the initial step in this direction by laying out their program a year or two in advance. Few companies, however, have set up curricula which continue from year to year in the fashion of a college.

A final device for the integration of training on the level of the individual employee is the individual "profile." This profile is a composite and current evaluation of each employee, made up of merit-rating reports, test results, production records, and any other evidences of the employee's strengths and weaknesses. An analysis of this evidence makes possible the development of a program of training for each individual, designed to promote his optimum growth.

For most companies, the integrated program is a goal that will not be reached in one year or two. Many changes will have to take place in concepts of training, in the organization and the philosophies of these companies, and certainly in training men themselves. But the goal still lies ahead. When industrial and business training are founded on comprehensive aims and planned, administered, and integrated by professional educators, only then will the vision be a reality; only then will all the miracles that have been attributed to training actually come to pass.

Summary

We shall now review the major points made in this book, arranged under nine headings:

1. Any program of training rests upon the assumption that planned, organized teaching is more profitable for management, and results in greater satisfaction and advancement for the employee, than does the alternative method of turning the worker loose to learn through his own unguided experience.

2. The growing social complexity of modern life, which is interwoven with both commerce and industry, makes the need for business and industrial training far more critical than it was during earlier, simpler, more stable times. Today's worker, faced by increasingly complex social and economic pressures of life in a rapidly changing

society, must have guidance—not in what to think about his own business and society as a whole, but in *how to think*. As data with which to do this thinking, the employee must receive training regarding the facts about his business.

Management, if it is to satisfy the employee as an individual—which it must eventually do, for people already are refusing to support any system that is unsatisfactory to them—must learn more about him as a person; about his social and psychological as well as his economic needs. It must learn how to run its affairs so as to help satisfy his deep-seated requirements. For these new tasks, management also stands in urgent need of training.

3. Training is needed on all levels of commerce and industry. If business expects workers to learn about management and its problems as well as about themselves, both technicians and top management are obligated to learn the facts about workers and their ways. In the future, a knowledge of the business must include a knowledge of the personnel through whom it operates, as well as of those who direct its course.

4. Training must be continuous. Even the best of men do not learn a thing and forever after practice it. Forgetting goes on apace, and refresher training of some sort is always in order. Moreover, business is a dynamic system in which change is the one element that endures from year to year. As a result, new and different needs for training arise without interruption.

5. Of the three areas of training—skill, knowledge, and attitudes—the latter has been most neglected, is most difficult, and now demands most attention. To be effective under modern conditions, training must deal with employee knowledge and attitudes as fully and effectively as it does with skill. Good attitudes in commerce and industry are partly the result of training concerning the policies, functions, and problems of supervision and high-level management. Good management in turn promotes good attitudes. Training programs that are designed to provide full information and an opportunity for discussion, that encourage suggestions and present problems, will surely help to develop fair, constructive attitudes profitable to both labor and management. Training therefore must provide the information that will motivate people, stimulate them, and advance them toward full self-realization. American business has led the world in developing materials, methods, and machines. It must now give attention to the social and emotional development of men and women, in order that they may function as understanding partners in business and in democracy, and never as skilled automatons.

6. We have advanced in the development of technical, motor, and professional skills. This advance, however, is restricted to a relatively small number of industrial corporations, and an even smaller proportion of our commercial houses. The others should follow their example.

7. There are no easy roads to success in commercial and industrial training. No simple formulas, no occasional shots in the arm, no packages of ten easy lessons alone will do the job. Since people are not machines, their responses depend on the social context of the situation. Since they are complex organisms whose actions and attitudes are not easily predictable, no simple rule and no single training program will apply equally to everyone. To be most effective, training must be prepared originally for a particular group and must be constantly adapted, even while it is in progress, to their changing needs. Good training also includes a wide variety of activities and many approaches—formal classes and informal or even casual contacts; the written and the spoken word; discussions, lectures, demonstrations, films, charts, exhibits, tours, and all the other varieties of approach which an alert training man can conceive. There is no single, simple, easy approach.

8. Because there are no short cuts and no commercial devices appropriate for doing the full job, training must be professionalized; this means that training must be directed by persons especially prepared for this work. Changing human habits, which is the objective of training, is a very difficult task—one that is the special function of the professional educator, not that of an engineer or accountant.

9. Training, like any new service, requires full and persistent support from management if it is to succeed. Lack of time, indifference, self-satisfaction, and the strength of established habits combine to make it most difficult to enlist employees in programs designed to change, even in small degree, the established patterns of their lives. So great is this resistance to change among adults that any training program must devote a substantial part of its approach to overcoming initial barriers. The time demanded will be minimized, however, if management demonstrates its support by attending classes and by helping to secure acceptance of the theories and practices taught by the specialists in training. It also is necessary for management to provide comfortable physical surroundings, and to give the training director a rank within the organization which will enable him to establish and maintain status among other executives with whom he must work.

Conclusion: The Practicality of Training

The activities of training developed throughout this book are far from the time-honored procedures which took an applicant from the hiring line, gave him a few directions, and left him either to succeed if he could or to fail and make way for another.

Training is neither visionary nor impractical. On the contrary, a sound and comprehensive training program offers business its surest means of reducing costs and avoiding the well-known losses that come from employee dissatisfaction and disinterest.

The values of training are evident in the measurable gains growing from reduced learning times, reduced waste and spoilage, reduced absenteeism and turnover. They are evident also in the intangible but unmistakable atmosphere that permeates and invigorates any organization in which employees are one with the men who supervise them, in which the whole company-community is a team functioning harmoniously for the mutual benefit of customers, employees, managers, and stockholders.

To a great degree these results of training can be measured precisely and scientifically in terms of dollars gained. They represent a substantial plus on the cost sheet. To some extent, however, results must be gauged by the keen business judgment of experienced leaders. Where such men have had the opportunity to observe and evaluate modern training activities, it is their opinion that training is a sound and profitable means of performing four essential services:

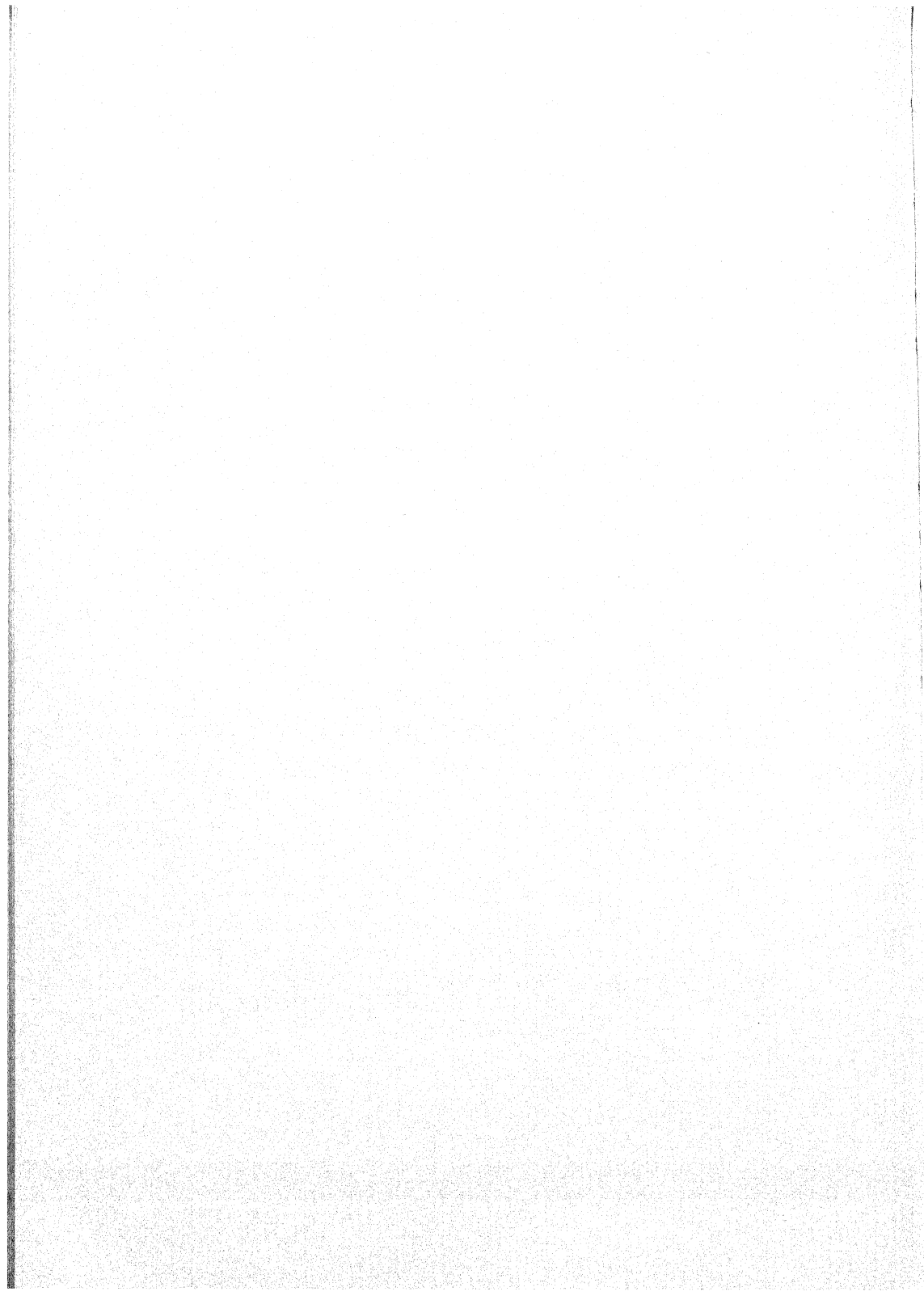
First, training can help people to perform the work normally expected of them. It can do so in office, store, or plant, and at managerial and technical levels as well as on the production line.

Second, training can help people to understand business, production, and management so that they may become enlightened participants, or at least understanding cooperators, in helping to meet the worthy goals of their employers.

Third, training can help management to understand employees and thereby satisfy those social and emotional needs upon which co-operation and teamwork depend.

Fourth, training can contribute to the growth and well-being of the individual on his job and also as a member of his community and his nation.

In short, training can make four varied yet interrelated contributions to the American goal of a people that live and work together, with fair profit and full satisfaction to all. It can have no greater justification in these days of complexity and change.



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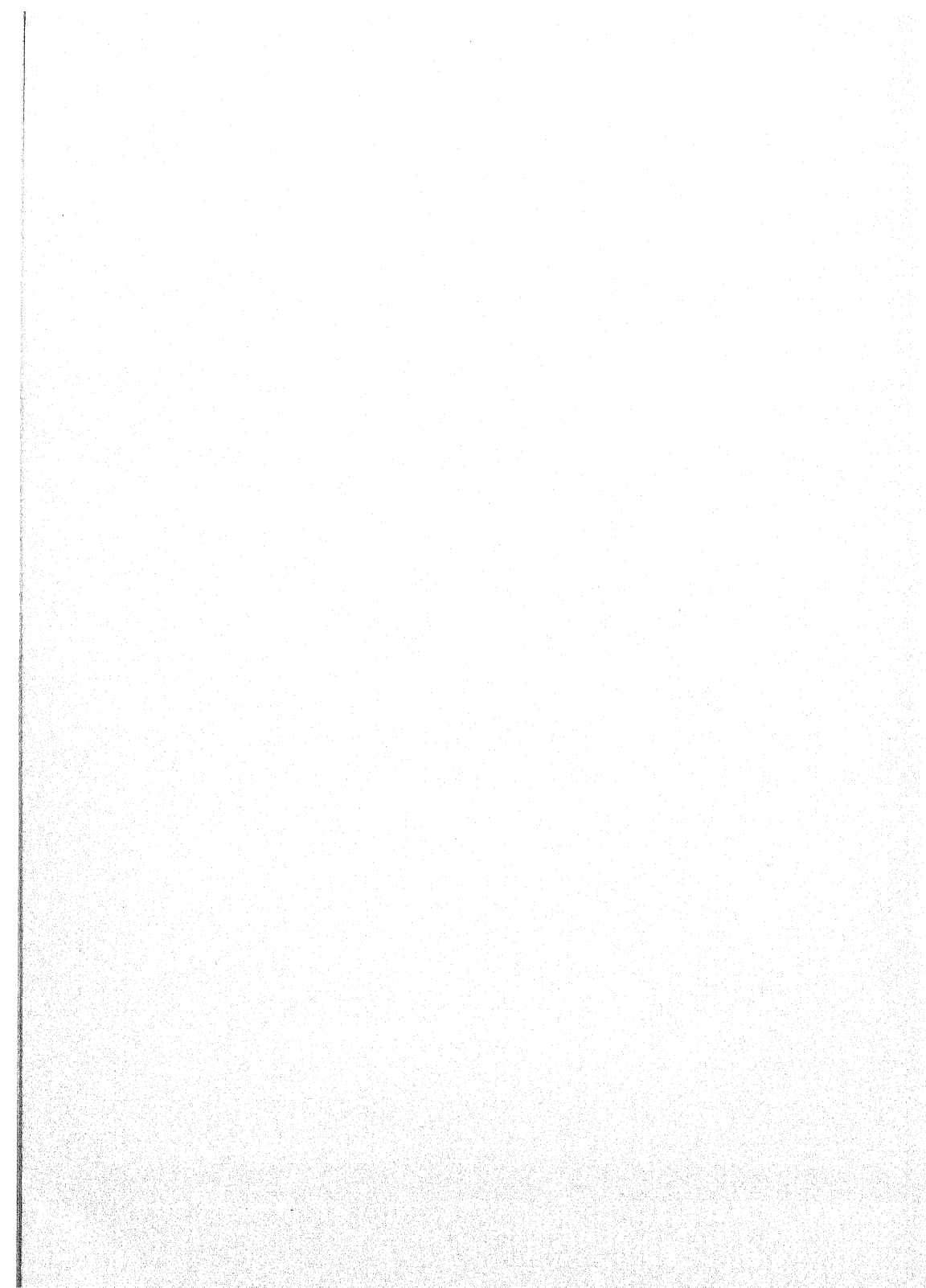
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